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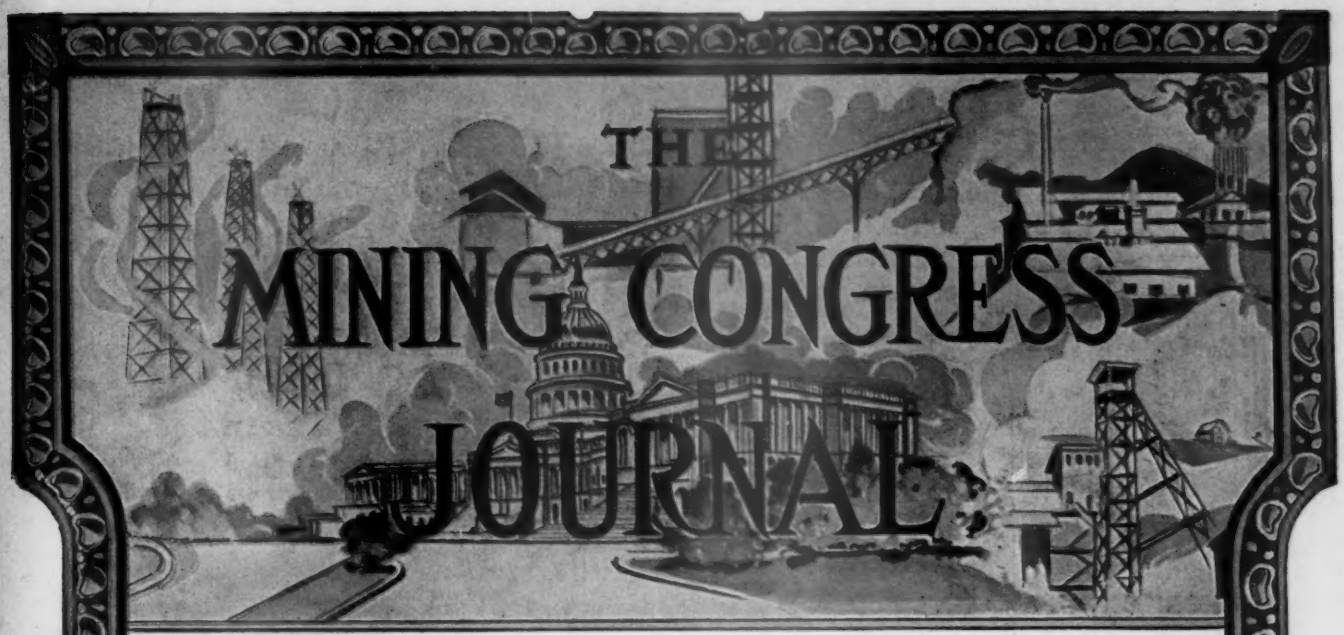

VOLUME 8 NUMBER 6

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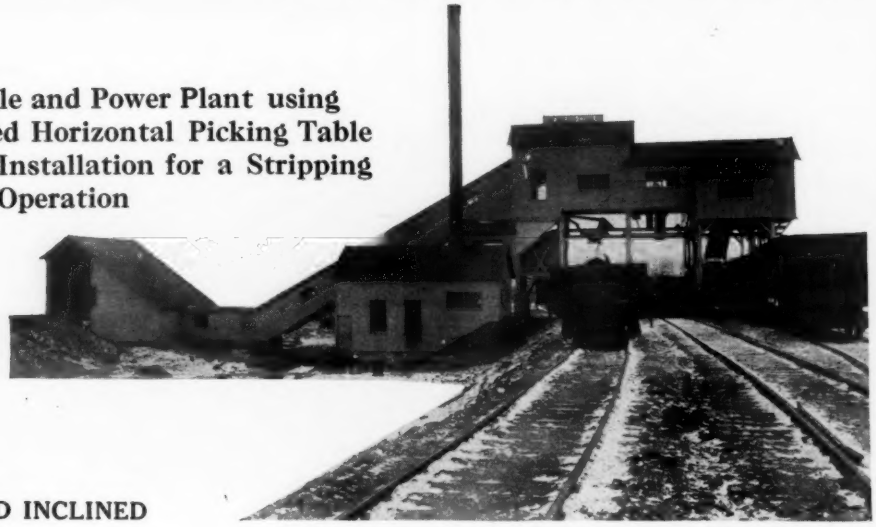

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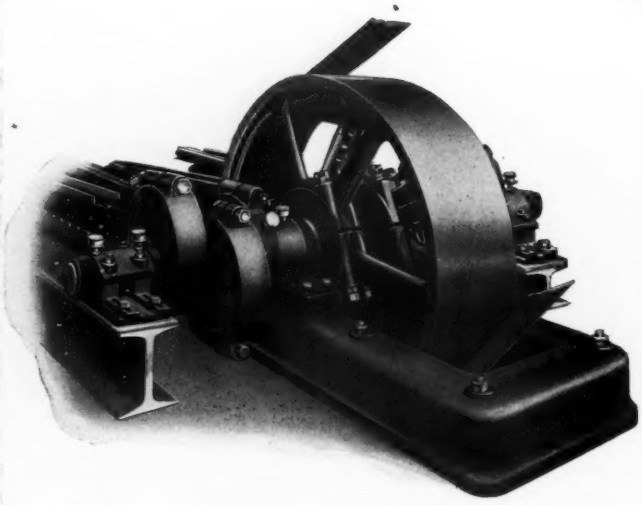

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THE MINING CONGRESS JOURNAL

JUNE 1922

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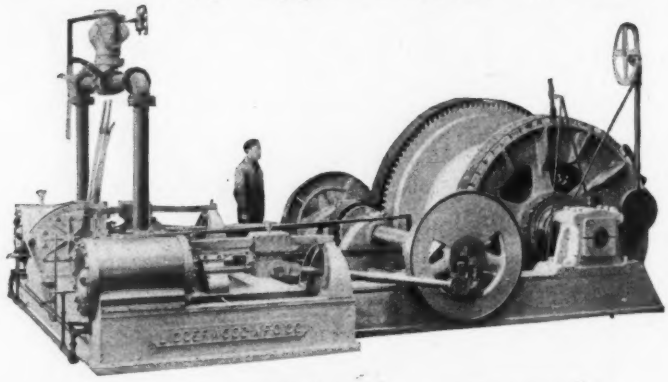

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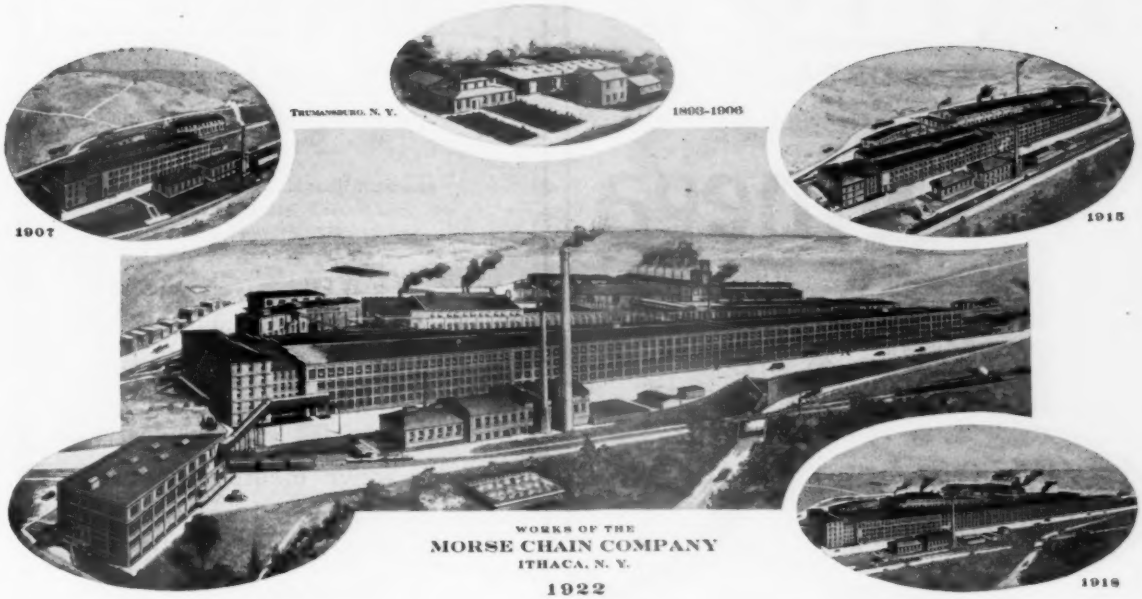

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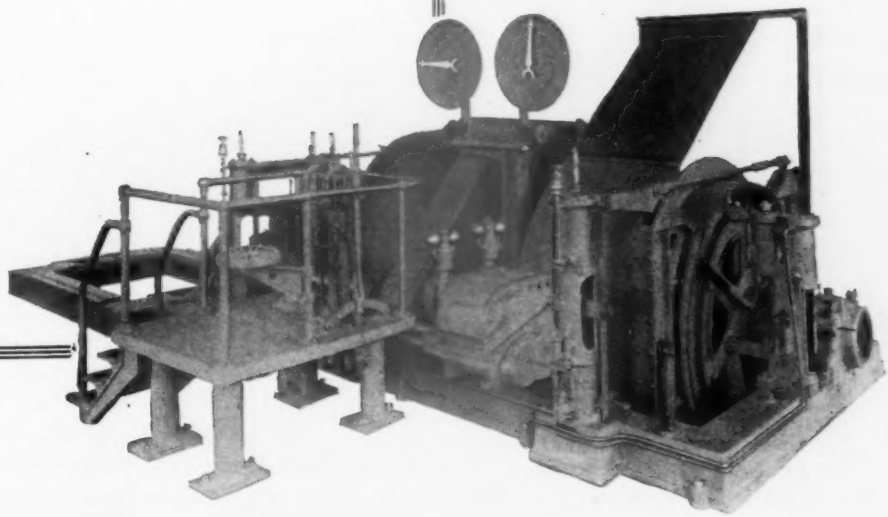

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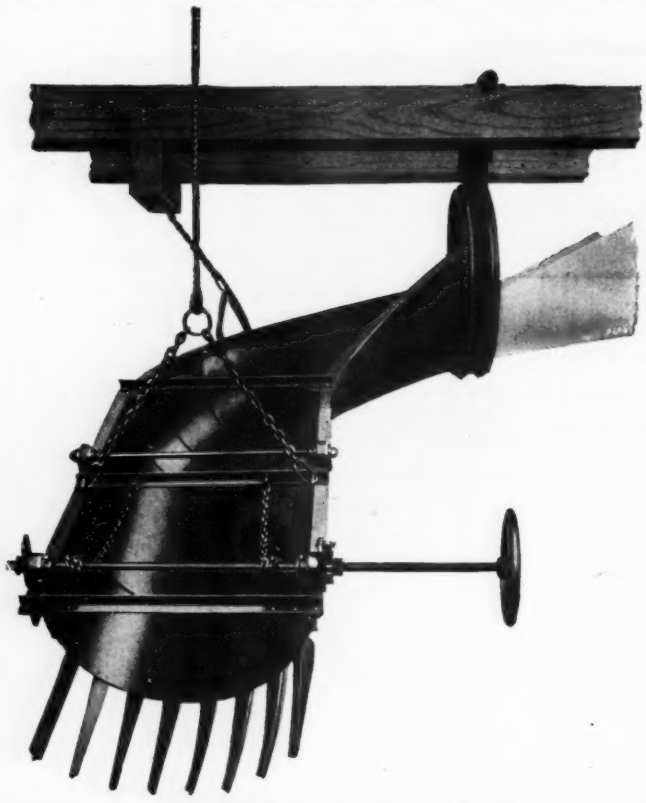

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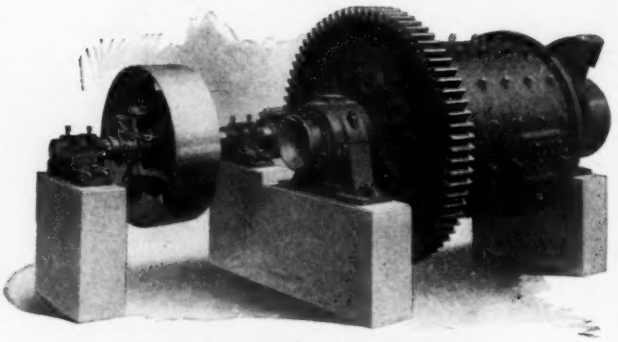

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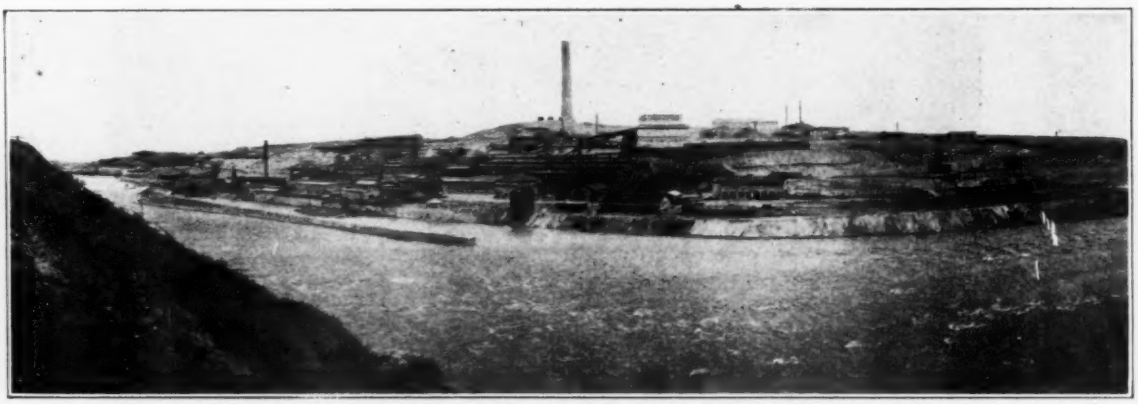

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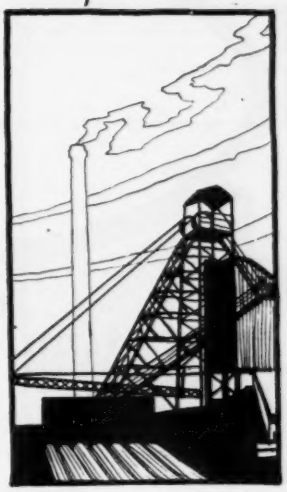

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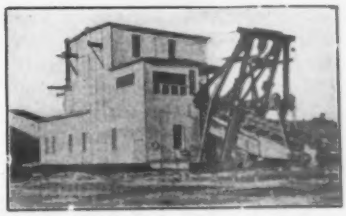

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DANGEROUS GOSSIP

WHAT a blessing it is that the old adage, "Give a dog a bad name and hang him," does not become effective in actual life. The following is but one of hundreds of slurs cast upon Congress by unthinking, unheeding people who do not understand the extent of the detrimental effect which must follow in the wake of such gossip. We reproduce in form one of the various references:

CAN'T SPOIL BAD EGG, EH?

From the Detroit Free Press.

It is a reasonable contention that an extensive change in the personnel of the lower house of Congress is not likely to make things any worse than they are.

The best school principal in the world would find his effectiveness largely curtailed if three or four semi-influential people in his district should systematically discredit his efforts as a teacher. What pastor of a church, rural or otherwise, can long maintain himself in the esteem of his congregation if a few of its members continually drop slurring remarks discrediting his ability or his character? Very fortunate is it that quotations like the above refer to Congress in general rather than to the specific members thereof. Even at that, the result must necessarily interfere with the best work which the members of Congress are able to do. If such remarks were purely of a partisan nature, the reasons therefor would be better understood. It is to be expected that a losing party or a losing candidate will naturally discredit the succeeding party and the successful candidate with a view to a partisan benefit in the next election. But it is not fair, it is not just, and it is very detrimental to the public good that the members of the greatest legislative body in the world should be continuously held up to contumely and ridicule. The fact is that the Congress of the United States, both Senate and House of Representatives, is made up of men who come as near to being the best selections which could be made as the average banking or business house makes in the selection of its officials. The one fundamental principle which seems to be continuously overlooked is that the United States is a representative government. He who represent a particular district in Congress must not be so far ahead of the average intelligence of that district as to be out of sympathy with his constituents, nor upon the other hand must he be so far below their average intelligence as to be unfit for the duties which he undertakes. As a matter of fact, the Congress of the United States, both Senate and House, are composed of high grade men fairly representative of their districts, loyal to the service of their constituencies and loyal to the country as a whole. They are not open to undue influence, they are always ready to listen to the needs of their constituents, always ready to listen to the appeals of citizens of their own or any other district, always anxious to inform themselves concerning the facts upon which legislation is to be predicated and almost without exception are fairly and fully representative. It is most surprising that Congress is as high in character as it is under the modern primary laws which force candidates to seek the office rather than the office seek the man as under the old days of party responsibility. The day may come when these conditions will lower the standard of Congress, but very fortunately thus far Congress has maintained its standing in spite of conditions which make for a lower order. The MINING CONGRESS JOURNAL has no word to say against just criticism of individual members for their actions. Every man undertaking public service must expect to be criticized all the time by his political opponents and frequently by those with whom he cannot agree. But the general policy of holding Congress and Congressmen up to ridicule should be discontinued.

COAL PRICE CONFERENCES

THE CONFERENCES between coal operators called by Secretary Hoover to devise voluntary measures for the protection of the public from increased prices and improper distribution of coal should open the way to understanding and agreement without government interference or regulation. The unanimous endorsement of Mr. Hoover's suggestions, and the willingness of the operators to cooperate in protecting the consumer against unwarranted advances in prices, would go far toward sustaining public confidence in the integrity of the operators and would stunt the growth of the agitation for government ownership of the mines.

For a number of years there has been strong agitation for government regulation of the coal industry. It has been contended that government supervision, and possibly ownership, is necessary to settle industrial disputes, stabilize production, and prevent overdevelopment of the industry. There is every reason to believe that too many mines and too many miners for proper economic development of the industry have been largely responsible for the waste caused by overproduction, that industrial disputes and strikes have been due in a large measure to union domination and interference which has prevented efficient and thrifty management of the mines, and that these conditions have resulted in high prices and public inconvenience.

But government ownership or control will not lighten the burdens of either the consuming or taxpaying public. Government ownership would increase the public debt and would bring about political manipulation of a great industry which should be kept free from the grip of any political party. Government control would be tremendously costly, as experiments in the past have proved. Either plan would introduce socialistic principles into

our system of government which would have a tendency to undermine the Constitution.

It is far better to leave the control and development of the coal industry to private enterprise, and prices to the law of supply and demand. Unusual conditions, such as exist in the present crisis, can be met without government control. Government intervention can be justified only in emergencies created by war or industrial difficulties which menace the peace and prosperity of the nation. Conferences such as those called by Secretary Hoover are helpful. Voluntary cooperation in the adjustment of industrial problems should be encouraged. If such cooperation in the interest of the public violates any law, the law should be amended or repealed.

Prompt action by the coal operators will effectively forestall a runaway market and will sweep out of the hands of the union leaders, professional agitators and socialists the only effective weapon with which they can hope to secure public support in their campaign for government ownership or control. As long as the operators act voluntarily to prevent a speculative market in the interest of the common good, the arguments for government intervention and the tirade against the operators are meaningless and of no effect. Secretary Hoover undoubtedly anticipated the dangerous possibilities of the situation and nipped them in the bud.

A WORLD MONETARY CONFERENCE

THE GENOA CONFERENCE has come to an end without accomplishing the purposes for which it was called. The question of reparation is one of vast importance and yet one which becomes insignificant as compared with the broader and deeper question of a stabilization of European finance. Just as the conference at Geneva, which led to no real results was followed by the conference at Washington, which led to very practical results, so we may assume that the failure at Genoa might well be followed by another conference at Washington under the auspices of the United States Government, and that from such a conference very definite results might be accomplished.

If there were no gold in the world, it is certain that European countries who are now almost entirely denuded of gold would in time find some method better than the old barter system by which to do business. The MINING CONGRESS JOURNAL believes that if the world's gold were evenly distributed and if governmental budgets were properly balanced that, although difficult, it would still be possible to do the world's business on a gold basis under conditions which would make for prosperity among all the civilized nations of the world. Just to the extent that one country possesses more of gold than its proper proportion, to that extent must other nations suffer without an appreciable corresponding benefit to the possessor nation. In fact, many economists are now insisting that the surplus gold in the United States will sooner or later lead to another period of increased inflation which will be greatly detrimental to our industrial life.

What is the situation as we find it? The United States is possessed of at least a billion dollars more of gold than its proportionate share of the world's supply. European nations which formerly had their share of this billion dollars of gold find their currencies depreciated in proportion to their gold deficits. These depreciated currencies disorganize business, create uncertainty and risk in all transactions and so destroy the nation's credit as to make impossible the purchase of goods from foreign countries no matter how greatly these goods may be needed: on the one hand a surplus of gold and a surplus of goods and merchandise and across the water a deficit of gold, the breaking down of credit, unbalanced governmental budgets and a lack of that credit which will enable these people to buy our surplus goods which they need more greatly than ever before in history.

America's conservative financial world says that time will right all of these conditions and that any effort to interfere with the apparent laws of economics will necessarily lead to disaster. The MINING CONGRESS JOURNAL does not approve this policy of the conservatives. It believes that the aid which has been extended to western farming interests through the War Finance Board will return itself a thousand fold in advantage to the country. It believes that starving nations whose tools of production have been destroyed by artificial conditions should be supplied with the tools of production to enable them more quickly to become self-supporting rather than that this country, even though it may be abundantly able to do so, shall be called on continuously to keep unproductive people in Europe from starving through charity rather than to make these people productive. H. R. 8404 was introduced by Congressman McFadden, Chairman of the Banking and Currency Committee of the House, August 24, 1921. On October 8, 1921, an extended hearing was had upon the bill, at which Mr. H. N. Lawrie, then economist of the American Mining Congress, presented exhaustive charts showing the depreciation of currency in the various countries and other information tending to show the importance of some action on behalf of this country looking to a system in stabilizing the rate exchange among the various countries.

This country has gone far in deflating its own currency, in stabilizing its prices both of wages and commodities, and there has been improvement in some European countries but in others matters have gone from bad to worse. The MINING CONGRESS JOURNAL believes that this government should take a hand in this matter and call together the representatives of industry and finance from such of the world's civilized countries as can properly take part in such a movement with a view of ascertaining the best method by which the industry and financial condition of the various countries of the world may be stabilized. These countries should be helped to that productive basis which insures prosperity to their people and develops that buying power which is necessary to stabilize the world's business, and to make certain that our own surplus gold and our superb financial condition as related to other countries shall not be permitted to be a detriment rather than an advantage. Foreign creditors should be treated as we would our own domestic creditors, who frequently must be supplied with the machinery of production in order to enable them to pay the principal debt. We do not agree with those economists who insist that the "whole world is now one economic unit." But we do believe that each of the economic units having ability to lend aid to others less fortunate should recognize the fact that unproductive people can never pay debts, unproductive people can not be self-supporting, unproductive peoples will always be a charge upon the charitable instinct of productive peoples in order that their starvation may be prevented. The practical way is to make the unproductive people productive, furnish the means by which obligations can be met, and to insist upon that thrift, economy and industry, which will make possible a payment of debts and a continued exchange of commodities to the mutual benefit of all. We urge upon the administration the necessity

of a monetary conference in the United States with a view to discussing these problems and arriving at a sane conclusion. Our pre-eminent financial superiority makes it very evident that this country alone is in position to lead in such a conference and that conferences among the debtor people can never avail a solution of the problem. The failure of the Genoa conference creates this opportunity and the MINING CONGRESS JOURNAL hopes that the administration will quickly respond to what seems to be a vital emergency.

THE IMPORTANCE OF LOCAL FREIGHT TRAFFIC

MANY AND VIGOROUS have been the contests waged by the Trans-Continental Railway Systems to hold trans-continental freight traffic. The railways have not openly opposed the development of river transportation, although in a general way it has been discouraged. The building of the Panama Canal would not have been accomplished had it relied upon the initiation of the trans-continental railways. The railway systems were credited with very active opposition against the free use of the Panama Canal by American coastwise vessels. The MINING CONGRESS JOURNAL has always urged the importance to both the railroads and the country, that its freight rates should be so adjusted as to develop local business along their various lines. While it has approved the general application of the long and short haul clause of the Interstate Commerce Act, this approval has been for temporary purposes, in the hope that the railroads while relying on trans-continental business for some part of their earnings, should continually be moved by the necessity for developing the local business along their lines, and that in due course of time there should be no favoritism to coast business because of water competition. The railroad lines showing the greatest prosperity are those which have derived a large part of their revenue from local transportation. Just at this time we again urge the importance of such freight rates as will develop local industry, and we believe this to be particularly important in the face of a new trans-continental competition which is just now being completed. In the Republic of Mexico, the Southern Pacific Railway is now engaged in the completion of 90 miles from Tepic to La Quemada. This will complete a through line from San Francisco to Vera Cruz, already a potential seaport with ample harbor facilities. With the completion of this line, rail haul from San Francisco to Vera Cruz will be 2,794 miles—379 miles less than the distance by the shortest route from San Francisco to New York. The time from New York to San Francisco via Vera Cruz will be very much less than the time from New York to San Francisco via the Panama Canal. This reduction in time over the part rail part water route, as compared with the all water route will enable this line of the Southern Pacific to offer very stiff competition with the straight trans-continental line operating over comparatively a longer mileage at equal or greater rates. We believe that the future prosperity of our railroads calls for a far-seeing policy which will look to the development of local industry, and that the future of the railroads ought to be based largely upon local traffic.

THE VALUE OF UNDEVELOPED MINERAL RESOURCES

A STABLE GOVERNMENT is the greatest blessing in the world. Government to be government must be supported. In early times, one of the great problems of government was to secure the funds upon which its continued operation could be supported. A tax gatherer of early times was more intensely hated than the tax gatherer of today because and only because of the fact that he came in closer contact with the tax payer. The continually increasing cost of government, both national, state and municipal, continually adds to the burden the perplexities of tax raising agencies. The proper taxation of mines presents unusual difficulties, because of the fact that the greater part fo the actual value of the mines has no present earning power. If taxes are to be based upon the ability to pay, then unproductive property having no earning power has no tax paying value. If all the property in any given tax paying unit is permanently unproductive, that tax paying unit will soon be forced to dissolution. Its assessment of taxes would quickly result in the sale of all of the property and its purchase by the tax paying unit which, having no means of securing further support, would be obliged to go out of business. If such tax paying unit should happen to be a whole state, that state would quickly be obliged to surrender its sovereignty because of its inability to maintain "a republican form of government." The mining industry has always been the pioneer industry. In the central portions of the United States the inducement to settlement was the broad acres of fertile land, but to a large extent these lands remained without more than nominal value until the development of a mining industry which furnished larger freights for the railroads, induced railroad extension and the centers of population developed by the mining industry, which in turn furnished a market for the products of the farm. In its development stages the mining industry has as a rule been generously treated by the tax paying power upon the well justified theory that the agency which created other tax paying property should be encouraged to the greatest extent. The application of this principle has been a potent factor in the development of many regions which otherwise would have remained without improvement. Increasing governmental expenses have in more recent days developed the belief that mineral reserves should be taxed upon the same basis as productive property of equal value. This theory might be applied with justice if each ton of coal in the ground is worth just as much as each other ton of coal. The fact is, however, that the ton of coal which is to be put upon the market today has a definite value, while the ton of coal which is not to be mined for fifty years has only a theoretical value dependent entirely upon the conditions which may prevail when the period has elapsed during which that ton of coal has been waiting for a chance to get into the market. To assume that it now has a taxable value is to assume that it now has an available market. The coal reserves of the United States are estimated at about three trillion tons. To give this coal a taxable value this year would be to assume that it should all be mined and marketed this year—an assumption entirely preposterous. These thoughts demonstrate most conclusively that the taxation upon mineral reserves should be made upon an entirely different basis than that applied to property which has an earning power either in the present or the immediate future and demonstrate the justice of applying an entirely different theory of taxation to those mineral re-

serves, the greatest value of which will only be obtained at that time when the economic life of the nation calls for their immediate use.

OUR GOLD AND SILVER POLICY

The American Mining Congress gladly welcomes any and every agency which promises to lend assistance in bettering conditions of the mining industry.

It will gladly cooperate with the proposed "American Gold and Silver Institute" in any plans which it may develop to that end. We therefore the more greatly regret the necessity of correcting a misunderstanding which has gained headway through a letter written by Senator Tasker L. Oddie, which states: "It is indeed with regret that I learn that the research work in behalf of gold and silver, which the American Mining Congress has been conducting under its division of precious metals, is to be abandoned." No criticism can be attached to Senator Oddie for this letter in view of the fact that it was based upon information which he believed to be correct. This statement which has been widely circulated is made the assumed basis of fact upon which the necessity for the creation of a new movement in behalf of gold and silver is predicated. Very fortunately, as we believe, for the mining industry, the American Mining Congress has not abandoned any of its work. For six months it has considered new plans for safeguarding and stimulating the production of gold and silver. One of the chief reasons for and one of the principal topics at the Western Mining Conference at Denver, June 20, is the formulation of a basic policy relative to gold and silver.

The necessity of increasing the production of gold in order to maintain the stability of the world's financial structure and to keep pace with the rapid increase in the volume of financial transactions has long been a major tenet of the American Mining Congress. In an address before the Trans-Mississippi Commercial Congress at its San Francisco meeting, October 8, 1908, the Secretary of the American Mining Congress stated:

"Theoretically, there are many substitutes for gold; practically there are none. The advocates of greenbackism have faded away in blushing silence, and even Mr. Bryan has ceased to advocate the free coinage of silver at sixteen to one, or any other ratio.

"The increased production of gold, which was supposed to have solved the free coinage issue, furnished but a temporary solution. Do you want proofs? In the fall of 1907, at a time of great industrial prosperity, when the production of the mines and the factories was the greatest; when every man desiring work was employed at the highest wages known to history; when the production of the farms was enormous; with the balance of foreign trade largely in our favor; with no war or pestilence to blight; with the amount of money per capita larger than ever before in our history; when that great empire builder, James J. Hill, was explaining the enormous cost of the additional railway facilities necessary to handle the increased business of the country, suddenly a startling financial nightmare spread over the country. Many of its factories and mines ceased operations, its railroad switches were filled with idle freight cars, the paying tellers' windows of our banks were closed and the conservative, honorable business men of the country with practical unanimity approved the action of the banks in repudiating their obligations, a course absolutely illegal and almost revolutionary. Does not a condition which leads honorable business to justify repudiation call for a solution? Can that situation be met by intensifying the conditions which produced it? What were those conditions?

"During a period of abnormally high and continually increasing prices, stimulated by the increasing credit, which recognized no limit, an effort to maintain the price of copper at double the cost of production and much in advance of its competitive value for industrial purposes, called the attention of the financial world to the fact that the structure of credit had grown top heavy; that the banks of New York city owed to their depositors more money than the whole country possessed, real money and credit money combined. Confidence changed to distrust, and those who could get possession of their money hoarded it. The banks made some of us believe they were hoarding the balances, which we could not get. 'Tis true that the per capita circulation had been constantly growing, but the increase had not been in proportion to the growing magnitude of business transactions and wealth.

"The industrial needs of the country require an increase in the circulating medium, not in proportion to population, but in proportion to the volume of business; and the value of the property which it must represent. There must be a proper ratio between the volume of basic money and the volume of credit money, which it sustains. To deny this, is to justify greenbackism. What is that proper ratio? The panic of 1907 indicates, if it does not prove, that the limit had been exceeded. We are told that it is the activity of money and not its volume which meets the requirement of trade. Within proper limits this is true; but that man will be difficult to find, willing to assert that the money of fifty years ago could move rapidly enough to meet the requirements of our present industrial life."

During all of the fourteen years which have elapsed since that time, the American Mining Congress has charged itself with the duty of rendering every aid to the gold and silver industry which was possible with the equipment and opportunities available. In the early days of the war, when the rising level of prices developed an economic burden upon the production of gold, the American Mining Congress began a campaign calling for government assistance to the gold industry. As a result of the investigations in this direction and the publicity which followed, the Reno conference was called by Governor Boyle, of Nevada, with the cooperation of the American Mining Congress. At the Reno meeting, the responsibility for the gold industry was assumed by a special organization and its committee there appointed. The American Mining Congress believed this to have been an unfortunate plan, but nevertheless, immediately offered all of its machinery to the new organization and at every opportunity during the existence of that organization gave it most cordial support. When this organization ceased its effort, the American Mining Congress immediately created its special precious metals division, and began its renewed efforts in behalf of gold. Sometime thereafter the work had progressed so satisfactorily as to make it possible for us to secure the services of Mr. Lawrie, under whose special direction the campaign for the McFadden bill was carried on. We believe that this campaign was of vast benefit to the gold industry notwithstanding the failure of the main purpose of the movement. When this movement had failed it became necessary for the American Mining Congress to develop those plans which would meet the needs of the future.

The American Mining Congress is now working in close association with the large producers of silver in this country to develop a sound plan of procedure in anticipation of the termination of purchases of silver by the government under the Pittman Act.

The particular function of the American Mining Congress in legislative matters is to furnish a diplomatic contact between the administration and the mining industry. It is charged with the duty of furnishing the facts upon which the industry rests in order that Congress, in dealing with these matters, may be fully informed. In case the facts as presented do not convince Congress that the industry is entitled to the relief which it asks, it is the function of the Mining Congress to bring together those representatives of the particular branch of the industry in order that they may have an opportunity to consider its immediate problems and if necessary to directly present their request to Congress. As conditions change and new issues are brought forward, it is necessary that the American Mining Congress shall so adjust its forces that any particular issue may always be presented by the best qualified agencies for that particular service.

TAXATION OF MINERAL RESERVES

IN HIS VIGOROUS opposition to the application of a federal leasing of public lands in the West, the late John F. Shafroth, many years governor of Colorado and later of the United States Senate, estimated that western property was taxed at a rate which equalled its value at least every thirty years. From this estimate he deducted his belief that any system which kept from the taxing power of the state more than one-half its acreage placed a double burden upon the remaining property which was in private ownership. Each state undertakes an obligation to the nation to maintain a republican form of government which includes the cost of schools, hospitals, public roads and the enforcement of law. If the owner of coal reserves which are not likely to be needed perhaps for a hundred years is forced to buy his property three times before he can possibly put it to a beneficial use and in addition thereto his capital by virtue of a fair interest charge has also doubled five or six times, it seems very plain that future generations are going to be burdened with a very exorbitant price for fuel; either this or the owners of coal lands must suffer a loss of several times the original investment. This condition encourages the wasting of coal reserves because of the fact that the sooner they are mined and thrown upon the market, the greater profit will accrue to the owner. Mr. J. R. Finlay, a leading tax expert, who has been serving as state mine appraiser for the State of New Mexico, recently reported his belief in the following language:

"I find no warrant for putting a value upon the undeveloped coal of the state; one might as well put a value on limestone or granite. Is not limestone made into lime and cement and granite into buildings and statues? Have not fortunes been made out of cement factories and granite quarries? The Rocky Mountains are made up of granite and limestone, why not value them at so much an acre? The answer is that all these resources are worthless until a plant and an industry is started upon them. They will then support a manufacture. The coal mining plant is an absurdity unless there is coal to take out. When there is a choice of a thousand places where the plant might be put, and from which the market can be supplied, it is evident that it is the plant, not the resource, that fixes the value upon the spot selected. This is emphatically the case in the coal mining industry of New Mexico. Practically the entire value is in the plant. In only one case do I find earning sufficient to give any value whatever to coal in the ground beyond the reach of present mine development."

In his letter of transmission, Mr. Finlay states as follows:

"Taxes are a part of the present productive energy of the people; the building of roads in 1922 cannot be accomplished by work that will not be done until 1942, perhaps not then. If one will carry this line of argument far enough he will perceive that it is just; suppose, for instance, there were only ten people in the state; how much tax could they levy on the probability that it would some day become worth millions?"

Again Mr. Finlay states:

"Thus I think that if you tax these lands, wherever they are beyond the area of established mine operation, your tax is a presumption of value which may not be there."

The MINING CONGRESS JOURNAL believes that an entirely different theory should be applied to the taxation of wasting resources than is applied to any other character of property. The application of a different theory is working havoc to the future lumber supply of this country. The taxation of standing timber upon its full present value yields so much of revenue as to develop extravagance in the handling of municipal business in lumber sections. It forces upon the lumber owner the necessity of marketing his lumber at the earliest possible time in order to take it away from the taxing power and thus derive a larger total amount for his lumber than can be done after years of taxation. It is tending toward relinquishment of ownership in the cut over area in that the owners are not justified in attempting to reforest these lands because of the fact that the tax upon the growing timber value during the seventy-five years more or less necessary to grow timber large enough for marketing purposes would with the accumulated interest thereon be in excess of the final value of the timber which might thus be grown. This system therefore stimulates waste of our present lumber resources and destroys all incentive for a reproduction of timber upon these cut over lands for future use. This process has resulted in the devastation of timber from some of our western states and if allowed to continue will in due time leave us entirely dependent upon importation to meet the country's requirement for lumber. The MINING CONGRESS JOURNAL believes that the true system of taxation as to wasting resources should be a nominal tax upon the surface area and a fair tax upon improvements and a full tax upon the output at the time it is available for market. A bad system of taxation of wasting resources may easily create conditions under which local governments may find themselves entirely without supporting income.

A FEEBLE EFFORT

FREIGHT RATE reductions have been ordered by the Interstate Commerce Commission to be made effective July 1; but inasmuch as these reductions do not affect rates which have been reduced since the horizontal increases authorized by the Commission in August, 1920, the present reductions afford little relief to the mining industry. They do not begin to approximate the 25 percent advance of 1918 plus the 35-40 percent increase of 1920, and it is not believed, even by the Commission, that they are sufficient to help in the reestablishment of business.

Chairman McChord, in the report of the Commission, expressed the opinion that "the general reductions now decreed fall short of full attainment of the desired end." "The record convinces me," he said, "that the present level of rates on the basic articles is now operating as a serious burden upon commerce and should be materially reduced, and that upon a considerably lower level of rates with an induced higher level of traffic activity, not only will the carriers secure more net revenue, but the prosperity of the country as a whole will be greatly enhanced. The pulse of industry and transportation is still below normal."

The railroads have been asked by President Harding to lower transportation charges by voluntary action. They have been asked to contribute their full share in the movement to restore and maintain prosperity. If they voluntarily cooperate to secure the desired result, that action will involve the further cutting of freight rates on coal, steel, farm products, minerals and other heavy low-priced basic raw materials below the level ordered by the Commission. The President's purpose is highly commendable, although there is no immediate possibility of voluntary action on the part of the carriers.

There is no doubt about the depressing effect of existing rates upon the basic industries of the country. In 1921 the volume of freight tonnage fell off tremendously, particularly in the case of raw mine products which for ten years past have furnished an average of 53 per cent of the aggregate freight tonnage of the carriers. Even after rates are reduced to the level now ordered by the Commission, there is little hope that many of the mines and smelters, which were closed because of prohibitive rates, can be reopened.

The mining industry furnishes approximately 65 per cent of the aggregate freight tonnage of the railroads—53 per cent of which is raw mine products, and 12 per cent manufactured products derived therefrom. The mining industry must have substantial reductions in order to continue to provide this vast tonnage, upon which depends the level of rates on all other commodities. Apparently the Commission's hands were tied. The law requires that in fixing rates, the carriers must be given a reasonable return on their investment. The Commission could not arbitrarily fix rates on the assumption that the lower rates would stimulate traffic. Therefore, it was impossible, under the law, for the Commission to reduce rates to the level necessary to bring about normal conditions in the mining industry.

The Commission estimates that the new rates will yield a fair return to the railroads 'under honest, efficient, and economical management and reasonable expenditures for maintenance of way, structures and equipment.'' Here is the real issue—the key to the whole situation. While the Transportation Act says that rates fixed by the Commission must yield a reasonable return, it does not give jurisdiction over the management or expenditures of the roads. The Commission can not fix salaries, wages, or other expenses, nor pass upon the propriety of any expenditure. Except in the matter of wages, the carriers have a free hand.

The position of the government is that of a guardian who is compelled to increase the expense allowance of a spendthrift ward as fast as the ward's expenditures increase, regardless of what the ward is doing with the money. This is the status of the Interstate Commerce Commission under the present transportation Act and Congress should amend the law without delay, or the source of the ward's fund—the coffers of the basic industries—will be entirely dissipated. The law should not make it possible for the carriers to keep rates above a reasonable level, but should be flexible enough to permit reductions to a basis where the largest amount of traffic will move.

ASSESSMENT WORK PROBLEM CONSIDERED BY INTERIOR DEPARTMENT

LIGHT has been furnished the mining industry on the quandary rising out of attempts to interpret the law enacted by Congress last August changing the mine assessment work period from the calendar year to the fiscal year. The situation surrounding claims located between January 1, 1921, and July 1, 1921, has been especially hazy, and it is upon these claims that Judge E. C. Finney, acting secretary of the Department of the Interior, has rendered his opinion. In a letter addressed to Senator Bursum, New Mexico, Judge Finney interprets the law to provide that work on claims located within this period must be completed before July 1, 1922, if relocation is to be avoided. The conflicting opinion has been that the work need not be completed before July 1, 1923.

While government authorities point out that the entire question is one for the courts to decide, since issues concerning loss of title to a claim because of neglect to complete assessment work within the specified time must be settled by the judiciary, the opinion is of value as an indication of the trend which it is thought would be taken by a decision of the court. Close students of the situation are agreed that those holding claims located during the first six months of 1921 should complete their assessment work before noon of July 1, 1922, for the sake of safety.

The full text of Judge Finney's letter to Senator Bursum follows:

''Referring to inclosed correspondence submitted to you by Mr. Pickens E. Woodson, of Katherine, Arizona, relative to when annual assessment work upon mining claims located between January 1 and July 1, 1921, must be performed to avoid the danger of relocation, I note that the Attorney General for Arizona has stated that, in his judgment, such locators would be required to perform the annual assessment work prior to July 1, 1922.

''Unfortunately, this is a question which can not be settled by the opinion of the Attorney General of the state nor by the Secretary of the Interior, as the question would arise, if at all, in the event of a relocation of such a claim and upon adverse proceedings in the courts. However, I am glad to give you my opinion for what it is worth, and may state that it coincides with that of the Attorney General of Arizona.

''You will note that the statues (42 Stat., 186) provides that the period within which work shall be performed ''shall commence at 12 o'clock meridian on the first day of July succeeding the date of location of such claims.'' A further proviso is to the effect that in all such valid existing claims the annual period ending December 31, 1921, shall continue to 12 o'clock noon July 1, 1922. The latter proviso was designed, of course, to take care of existing claims and to give an extension of six months within which work might be performed thereon. One of the reasons for the latter proviso was to avoid having the year within which assessment work must be performed end at different time for different classes of claims. As to the first provision of law, it seems clear that it was intended to permanently change the time within which annual assessment work upon mining claims must be performed, so as to have the year begin and end with the first of July, instead of the first of January as heretofore. The requirement in the statute is that the year within which assessment work is required to be performed begins on the first day of July succeeding the date of location. Therefore, if a claim were located, say, in June, 1921, the year within which work was required to be done began on the next first of July, or July 1, 1921, and to avoid relocation must have been performed during the year beginning July 1, 1921, and ending July 1, 1922.''

Although the greatest amount of perplexity caused by the change in the law is centered in those cases which are covered by the opinion quoted above, much misunderstanding concerning the situation in general prevails if the number of letters reaching officials in Washington during recent weeks is to be taken as a criterion.

Opinion is not at variance concerning those claims not involved in the quandary surrounding those located during the first six months of 1921. Officials are agreed upon the following interpretations:

Work for 1922 need not be completed until July, 1923, since the date upon which work for 1922 should start is advanced from January, 1922, to July, 1922, under the law passed by Congress last August which shifts the period from the calendar to the fiscal year. The old law stipulated that the period for assessment work should begin with the first day of January succeeding location.

Claims located after July 1, 1921, and before July, 1922, have until July 1, 1923, in which to complete work without being subject to relocation.

Claims located after July 1, 1922, and before July, 1923, will have until July 1, 1924, in which to complete work.

PLANS COMPLETED FOR CONSTRUCTIVE MEETING OF WESTERN MINING MEN

FINAL PLANS have been formulated for the conference of representative leaders of the western mining industry, to be held at Denver, Colorado, June 20 and 21, under the auspices of the American Mining Congress, for consideration of problems confronting the industry and to evolve a constructive platform which will have the united support of the western mining states.

This conference, the first of its particular character in the history of the mining industry, was called by a conference committee consisting of representatives of each of the western mining states. Among the members of the committee are:

P. G. Beckett, General Manager, Phelps-Dodge Corpn., Douglas, Arizona; James S. Douglas, president, United Verde Extension Mining Co., Jerome, Arizona; Robert E. Tally, general manager, United Verde Copper Company; Jerome, Arizona; F. W. Bradley, Bunker Hill & Sullivan M. & C. Company, San Francisco, California; George E. Collins, governor, Colorado Chapter, A. M. C., Denver, Colorado; George M. Taylor, Portland Gold Mining Co., Colorado Springs, Colorado; Bulkeley Wells, chairman, Colorado Metal Mining Fund, Denver, Colorado; Jerome J. Day, Hercules Mining Co., Wallace, Idaho; James F. McCarthy, president, Hecla Mining Co., Wallace, Idaho; Stanley Easton, manager, Bunker Hill & Sullivan M. & C. Co., Kellogg, Idaho; Francis A. Thomson, dean, Idaho School of Mines, Moscow, Idaho; William B. Daly, assistant general manager, Anaconda Copper Company, Butte, Montana.

THE COLORADO STATE CAPITOL

Where hundreds of western mining men will seek solutions of problems confronting their industry when they gather in Denver, June 21 and 22, to attend a conference held under the auspices of the American Mining Congress

John M. Gillie, mining engineer, Anaconda Copper Company, Butte, Montana; C. S. Muffley, president, Montana Mine Owners & Oprs. Assn., Helena, Montana; E. D. Boyle, Governor of Nevada, Carson City, Nevada; John G. Kirchen, general manager, Tonopah Extension Mng. Co., Tonopah, Nevada; C. B. Lakenan, Nevada Cons. Copper Co., McGill, Nevada; Robert M. Betts, manager, Cornucopia Mng. Company, Cornucopia, Oregon; H. M. Parks, director, Oregon Bureau of Mines and Geology, Portland, Oregon; Chambers Kellar, Homestake Mng. Co., Lead, South Dakota; H. W. Seaman, president, Trojan Mng. Co., Deadwood, South Dakota; R. C. Gemmill, Utah Copper Company, Salt Lake City, Utah; L. S. Gates, Utah Copper Company, Salt Lake City, Utah; G. W. Lambourne, governor, Utah Chapter, A. M. C., Salt Lake City, Utah; Maurice Leehy, lawyer, Seattle, Washington; R. S. Ellison, Midwest Ref. Company, Casper, Wyoming; B. B. Brooks, Casper, Wyoming; L. A. Reed, director, Midwest Refining Company, Casper, Wyoming.

Chief among the problems to which the conference will devote its attention will be those arising from proposals for federal legislation covering revision of the mining laws and the Denison federal blue sky bill. The effort will be one of obtaining a viewpoint concerning these issues which will be representative of the entire mining industry.

The national blue sky legislation stands as a matter of great importance to the mining industry, in that much of the opposition to the measure has been inspired by opinion that enactment of such legislation would prove of serious detriment to the industry by placing a handicap upon development of enterprises which, while thoroughly legitimate might not gain the approval of securities commissioners who are versed only in financial matters and are not familiar with the necessarily hazardous aspect of mining development. Opposition to the bill already has been expressed in many quarters by western mining men and the conference will seek to crystallize these expressions into a tangible policy for presentation to the Senate Committee on Interstate Commerce when it considers the bill which already has passed the House.

The issue surrounding the proposed mining law revision is much more complex, since a wide variance of opinion on the subject exists within the industry itself. Decisions by the conference covering the various proposed revisions will be especially valuable at this particular time because the House Committee on Mines and Mining which is considering the measure is awaiting the views of the western mining men, having already heard the testimony of the engineers and others interested in the drafting of the bill.

The apparent need for wise consideration and forceful action in connection with the problem growing out of the probability of exhaustion of the Pittman act's purchasing power within two years is expected to be satisfied to a large extent by results of discussions which the conference will hold on this important subject. Continued attacks are being made against the Pittman act by distinguished but theoretical economists who ignore the sanctity of the contract which it embodies, and the conference will direct its efforts to the formulation of a convincing and logical set of arguments designed to meet these attacks which would maim the silver mining industry of the country were they to be successful. Additional complication is thrust into the situation by failure

of the Pittman act to bring about the increased silver production which would have resulted had mining costs been such as to permit the mining of gold and the base metals upon a profitable basis.

The conference will devote much of its time to efforts to work out a policy which will be helpful in the maintenance of the gold standard and the safeguarding of public interests. It is being pointed out that there never was a time when it was of greater importance to re-emphasize the necessity of maintaining the gold standard as the basis of our commercial and financial structure. Moreover, a great dearth of gold throughout the world in spite of the immense gold reserve in the United States is an indication of the wisdom of stimulating gold production and of making it possible for the gold producer to operate his property in such a way as to enlarge production.

Lead and Zinc Mining Problems

Specific plans are being laid for the conference to follow in seeking solutions of problems in the lead and zinc industries. The prosperity of the west requires a uniform production of its precious, base and rare metal resources. Lead and zinc are basic in western progress. The improvement of markets through increased uses and consequent demands will largely aid in sustaining and bettering smelting facilities and securing better freight rates. No one of these industries can continually prosper by itself and an intelligent and comprehensive movement in the general behalf will be welcomed by both smelters and railroads.

Prominent mining men long have seen the necessity for a closer analysis of both state and federal tax systems as the preliminary step in efforts to release the mining industry from the burden of oppression which it now is carrying. Evidence that the time has arrived for this analysis to be made if it is to produce the maximum results has shown it to be a necessity that the conference take the entire subject under careful consideration. The opportunity will be afforded for the drafting of recommendations for presentation at the general convention of the American Mining Congress, to be held in Cleveland, October 9 to 14.

In considering the framing of its conservation policy, the conference will proceed upon the basis that fair and proper conservation through efficient utilization will continue to develop in the mining industry and safeguard our future supply of raw materials. The postponement of such measures because of false conservation probably will be attacked on the ground that it will deprive those future and present generations of the opportunities of effectively utilizing these resources. Definite criticisms will be framed against legislative or departmental procedure which instead of conserving through effective utilization creates barriers which prevent and hamper the proper use of mineral resources.

Views of Representative Speakers

Representative public men from each of the great mining states have been invited to present their views regarding the situation and to outline their policies relative to western mining.

In addition to the set program, this meeting in Denver will be a general "get-together" of all western mining men. It will be a preliminary celebration of the twenty-fifth anniversary of the founding of the American Mining Congress and will enable western mining men to greet their old associates and join in a real western jollification.

BURTON BUNCH IS WESTERN SECRETARY OF MINING CONGRESS

INCREASED ATTENTION is to be given the interests and problems of western mining operators through appointment of Burton Bunch as western secretary of the American Mining Congress, effective this month. Mr. Bunch for two years has been secretary of the New Mexico Chapter of the American Mining Congress and secretary of the Southwestern Good Roads Association with headquarters at Silver City, N. M., where he temporarily will retain his offices in connection with the new position. Later he will establish his headquarters in Salt Lake City, Utah.

BURTON BUNCH

In his new capacity, Mr. Bunch will direct his efforts toward effecting a crystallization of opinions held by the western mining industry, thus laying the ground for speedy and effective action in disposing of vital problems and issues. His natural talent for conducting organization work will stand him in good stead.

It is particularly fortunate for the mining industry that a man of Mr. Bunch's experience and abilities should assume such a position at the present time, when every effort looking toward progress in regaining ground lost during the depression era can well be utilized.

RETURN TO GOLD STANDARD NOTED

A GRADUAL restoration of the gold standard throughout the world now is the predominant recommendation of foreign experts, and the search made during the past few years for some kind of credit substitute for the gold standard apparently has been abandoned, according to experts of the Federal Reserve Board, who have kept a close watch on the economic background and developments of the Genoa conference.

Now that the return to the older basis is being urged generally, close students of the situation find it difficult to determine precisely what effect such a plan of gold standard restoration would have upon those countries which now have more than their normal share of gold, according to a recent statement by the board. This result and that which would come to those countries which were swept bare of gold by war and post-war financial conditions would depend largely upon the technical methods of procedure to be developed in carrying the new plan into effect. Comment by officials is centered in measure around the recommendation of Sir Robert Horne, Chancellor of the British Exchequer, that at an early date a world conference of note-issuing banks should be called for the purpose of considering in the fullest detail the policies which must be pursued in any process of gradual restoration of the gold standard.

FEDERAL BLUE-SKY BILL PASSES HOUSE BUT FINDS TARIFF HALTING PROGRESS IN SENATE

TIDED ALONG by expedited action in the House, the Denison blue-sky bill proposing federal regulation of securities transactions has reached a point of legislative progress not hitherto enjoyed by any measure of similar character introduced in Congress. It now rests with the Senate Committee on Interstate Commerce, having passed the House under a special rule without a record vote being taken.

Preliminary arrangements for hearings on the measure have been made by the Senate committee, of which Senator Cummins, Iowa, is chairman, but no definite date has yet been set for the sessions.

Little likelihood exists that the Senate will take action upon the Denison bill during the present session of Congress. The pressure of business brought on by the long-continued consideration of the Tariff bill mainly is responsible for this condition.

A new element of opposition to the measure has evidenced itself since the House passed the bill. Mortgage bankers and real estate interests quite generally are communicating with the committee, expressing opposition to that section of the bill which would regulate the percentage of the initial payment as compared to the final purchase price in real estate transactions involving mortgages.

Opposition to the bill on the floor of the House was waged mainly by representatives of western mining states, although the bill was criticized by others who expressed doubt as to its constitutionality, its practicality of administration, and the measure of efficiency held in results which it would provide. No record vote was taken on the measure.

SENATOR ALBERT B. CUMMINS
Chairman of the Senate Committee on Interstate Commerce, which will hold hearings on the Denison blue-sky bill

Many amendments were proposed by those who sought to remove from the bill any possibility of its stifling development of mineral resources but no major success was attained in these efforts, the bill going to the Senate practically as reported by the committee.

Although spokesmen who attacked the bill on the grounds that it would prevent development of the mineral resources of the country repeatedly asked advocates of the measure to show how it would have other than this effect, no really satisfactory answers were given.

It was repeatedly shown that mining prospectors and promoters operating on a small scale could not afford to go to the officials of the states in which they wished to sell their securities. The point was made that if trips of this nature were to be made to each of the 39 states which now have blue-laws, with the engineering research expenses also involved, the cost of securing approval under the Denison bill would in many cases be greater than the amount of money needed to carry on the prospecting and operating phases leading up to mineral production on newly opened properties.

Using this argument as the main basis of his opposition to the bill, Representative Layton, Delaware, stated that if this routine had to be heeded the American people would be "robbed of billions of wealth" through the handicaps thrown in the way of development of mineral resources.

The case presented against the bill on the floor of the House by those who sought to prevent a burden being placed upon mineral resources development was brought out in a concise way during the course of the following colloquy between Representatives Layton and Roach:

Mr. Layton. I desire to reiterate what I have said before, that with the esential purposes of the bill I am in sympathy. I am in sympathy with any legislation that has for its purpose the protection of the people of the country against fraud in any way. My chief concern is whether in flying from one ill, however, we are not flying to others that we know not of. I believe that it is the sentiment of this House, the experience of this House, that if such a law as this had been on the statute books of the United States for the last 75 or 100 years you would have had very little of the development of the mineral resources of the country in such a way as would have made the wonderful difference between what we are and what we would have been. Nobody seems to be willing to look the proposition in the face. My friend from Illinois (Mr. Denison) did not meet it, and my other friend from Illinois (Mr. Graham) has not met it. What I am trying to get at is this. A purely prospective, honestly legitimate undertaking, a belief and faith in mineral resources in the ground, but which have not been proven, can not get upon any of these stock exchanges. That being the case, they can not get any money there.

Representative Arentz, Nevada, took issue with statements by advocates of the measure that it would only cost approximately $100 to secure approval of a security by a state outside of the one in which the prospective operation is situated, an action demanded by the Denison bill in cases where interstate commerce is used to advertise the enterprise. Commenting on this point, Mr. Arentz said:

"A man owning this property, wishing to register his stock, I may say, must either go there in person or have an agent go there. He must spend from two months to six months in bringing the matter before the proper commissions of the states, paying the expenses during this time, and in many cases a representative of the state must go to the property, make an investigation, and report back to the commission; and I leave it to you, gentlemen, if it will not cost more than $1,000 to do this. It would mean, then, that for the 39 states it would cost approximately $39,000 for a man who wishes to raise possibly $15,000 or $20,000 for the development of a

small property to bring this property to the point where a sufficient amount of ore would be developed or a well would be carried down to a sufficient depth to justify a man of larger means or a corporation in taking up the property and carrying it on. When it reaches this point this man or this corporation could place it in the hands of a dealer in stocks. On page 10, line 17, the bill provides as follows:

"(e) To any bank, savings institution, trust company, insurance company, or to any corporation, or to any broker or dealer.

Practices of Large Dealers

"He is exempted provided that such broker or dealer is actually buying and selling securities as a business. From actual experience I know that it is just such a dealer who could do this. I could mention several big dealers in New York and Boston and dozens of such men who have the money and have the means to start out with a tremendous big advertising propaganda and bring before the people of the several states their proposition, sell them unlimited shares of fraudulent stock in a property of little, if any, merit; but the small man of small means who has a meritorious property, needing but a few thousand dollars to put his property on a producing basis, would not do this.

"There are many such properties in my state of Nevada, properties containing nearly if not all minerals and metals utilized in every human endeavor.

"We neither invite or desire fraudulent operators to operate either within our state or to handle shares of stock representing an interest in a Nevada property.

"We desire, yes, we demand, the right to bring our natural resources to the attention of all the people of the several states. I believe in the man of small means, the owners of small property, and I want him to raise money for his company just as easy as the man of wealth can."

"If this law be enacted," said Representative Smith, Idaho, it will practically make it impossible for a company of poor men to develop a mining property even if there is every reason to believe it is a valuable mining property."

"Necessity Not Clear"

Mr. Smith incorporated in his remarks a letter from Stewart Campbell, inspector of mines of Idaho, which reads, in part, as follows:

"The necessity of a law of this kind is not clear to me unless it is to prevent the use of the mails, express, and telegraphs to defraud. If such is the case, why kill all legitimate promotions to reach a few illegitimate promoters? If this is the intent of the bill, would it not be better to give the Post Office Department a small amount of the appropriation that would be necessary to police this bill, change the postal fraud laws so it will be possible to convict the illegitimate promoter who is now using the mails to defraud yet is able to avoid conviction and continue his operations through cunningly designed literature that is entirely misleading yet within the law? If this is done, and should be, there would be one Federal law that the people of the United States will have a unanimous respect for, with the reverse being true if H. R. 10598 becomes a law."

Declaring that the bill has for its purpose "a consummation devoutly to be wished," Representative Vaile, Colorado, joined with his colleagues of other western states in making a plea that no legislation be enacted which might in any way "choke the venturesome spirit which developed our country and which is one of our finest national assets."

A unique point in opposition to the bill was raised by Representative Steenerson, Minnesota, chairman of the post office committee, when he declared that the purpose of the bill was to accomplish indirectly something that could not be accomplished directly by Congress. "To convict a man under this bill, you need not allege or prove any fraud or even intent to defraud," said Mr. Steenerson, adding that the bill proposes to make criminal something that has no element of fraud or wrongdoing in it.

Exemption of the stock exchanges from provisions of the bill was made a target of attack, Representative French, Idaho, claiming that a special privilege was thus conferred which would operate as a monopoly of business. Exemption of exchanges also was opposed by Representative Summers, Washington, who offered an amendment exempting any securities legally authorized in three or more states, the amendment being defeated. Representative Ramseyer, Iowa, argued that the measure was objectionable because it would forbid the use of the mails without securing the consent of the state in which the securities are to be marketed. He declared that although the Post Office Depratment would administer the law, none of its officials were called by the committee nor were representatives of the Treasury Department consulted as to what securities should be forbidden. Mr. Ramseyer advanced a strong point in declaring that fraudulent schemes already were barred by postal law, referring to prosecution continually being carried on by the Post Office Department as evidence that all laws necessary already are in existence. He denied that the Post Office Department approved the legislation, as stated in the committee report, adding that the Post Office Department had not asked for the legislation and had no intention of doing so.

Covers Innocent Transactions

Representative Volstead, Minnesota, chairman of the Judiciary Committee and author of a Blue Sky bill which has received consideration by that body, emphasized the point that many transactions which are not fraudulent are covered by the bill, which designates as unlawful every act that is characterized as such by the state, whereas large numbers of these acts may be devoid of fraud. He pointed out that a man in New York may send stock to Minnesota that has not been properly listed in that state. There may be no fraud in that fact. The stock may depreciate in value under the pending bill. Mr. Volstead contends the owner has the right to sue to recover the whole purchase price.

"You can not make an act a fraud by calling it a fraud if it is not a fraud," Mr. Volstead declared. "I am willing that you should draw a law punishing fraud and giving a right to recover in cases where fraud or misrepresentation induced a person but it is ridiculous to make a person liable for damages or to give the purchaser an option to repudiate the contract."

Representative Walsh, Massachusetts, offered an amendment which was rejected proposing to strike out the provision that a security shall be void at the election of the purchase, contending that the legality of the act should not be determined by an individual. His inclination was to criticize legislation of this type on the ground that people who are fools enough to buy "blue sky" should not be encouraged by Congress to lay aside caution and prudence simply because Congress denies the use of the mail to them.

STANDARDIZATION IN MECHANICAL LOADING IN METAL MINES

By Lucien Eaton*

WHILE the World War was in progress the demand for metallic products increased to an extent never before known, and it fell to the mines of the United States to supply the materials needed. Coincident with this unprecedented demand immigration practically ceased and a large part of our manpower was diverted from the channels of production. The resulting shortage of manual labor was felt severely by all industries, but most particularly by that of metal mining, which up to that time had depended almost entirely on manual labor for underground operations. Labor shortage also stimulated interest in all sorts of labor-saving devices and led to the design and construction of a vast number of mechanical contrivances to take the place of hand work, especially shoveling. Chief among these devices was the mechanical loader, and there was hardly a district in the country where at least one type of machine was not being tried. When so many different men working under so many different conditions set to work at the same time, there was necessarily a great duplication of effort, and the variety of designs evolved was very large. A great majority of the machines tried were, of course, failures, but continued effort under pressure of competition has developed a number of machines which have already proved successful in their own particular fields under many conditions, and are being improved from day to day.

LUCIEN EATON

A study of these machines makes apparent the need of some sort of standardization, but progress in this line of work has not reached a stage sufficiently advanced to require more than very general standards. Any attempts to tie down designers and builders of loading machines to definite types and mechanical movements would retard development instead of assisting it. There are, however, many benefits to be derived from an analysis of the conditions to be met and from setting up temporary standards to which loading machines should conform. Certain recommended practices, based on the most successful methods of operation in use, may also be set up as temporary standards until something better can be found.

In mechanical loading on surface the various makes and kinds of machines have been fairly well standardized—sufficiently so, at any rate, for a good steam shovel runner to be able to go from one kind of steam shovel, drag line, or crane to another, and operate it successfully with very little practice. This amount of standardization is as much as can be expected for underground loaders in the near future, and is no more than has been already accomplished with rock drills; nor does it seem too much to ask. In loading practice—also surface methods have been pretty well standardized for different kinds of work and different types of machines, and similar standards of practice must be developed for work underground. It is, of course, not to be supposed or hoped that any one standard of equipment or practice will remain standard for very long, because progress must not be retarded. Just as we have seen steam shovel practice advance from 40-ton shovels and 1½-yard, hand-dumped cars to 300-ton shovels and 24-yard cars dumped by air, so we may hope to see advances in underground practice, if not so much in size as on surface, at least in refinements of practice.

In general there are two sets of conditions underground, under which loading machines are used, where the results expected are radically different. These are in work (1) where speed is the first requisite, with cost secondary, and (2) where cost per ton receives the first consideration and output is a secondary matter. Under the first classification comes tunnel-driving and drifting where the overhead charges must be borne by few openings. In this category comes also the mine with too few working places opened to supply by ordinary methods of loading the tonnage required for economical operation of the mill. Under the second classification comes loading ore in stopes or drifts under normal conditions of operation. In the first case the prime object is to avoid delays and to get the greatest possible output out of the machine, even at the expense of an increase in labor cost. In the second case the greatest attention is given to getting the most efficient results from the labor employed, often at the expense of reduced output from the machine, for men have to be paid when they are idle during working hours, and machines do not.

There are also limits for the size of loader that can be used, especially in drifts and tunnels, and even in open stopes, where the openings between stopes are small. In large tunnels very often the same machines can be used as in stopes.

The development of drag-scrapers for moving ore underground has opened up another large field which often overlaps that occupied by loading machines. Although local conditions vary greatly, some sort of standardization of scraper design and operation has already been accomplished. The extremes of sizes, however, vary from a 40-pound scraper pulled by a 2½-H. P. engine to a 5,000-pound scraper pulled by a 150-H. P. engine. In general it may be said that the larger the scraper the more rapidly and cheaply it will move the

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ore, but there must always be a compromise between capacity and portability. Already two sizes of equipment have been pretty generally adopted for different kinds of work. For sub-level work and for small tonnages hoists of 5 to 7-H. P. are used for pulling scrapers 3 ft. to 4 ft. wide, and in larger mines in stopes and on main levels hoists of 12 to 20-H. P. are used for pulling scrapers 4 ft. to 4½ ft. wide. The very large scrapers are special installations and will never come into general use.

Study of Present Practice

In making a study of present practice for the American Mining Congress, questionnaires were sent to representative mining companies in all parts of the country and information was received from nineteen companies in regard to twelve different types of loaders and three classes of scrapers. There was a wide variation in the size of car and gauge of track used, and in the number of men in a crew, but the sizes of the working places could be classified roughly under the headings mentioned above, namely drifts, large tunnels and stopes, and the limitations of different types of machine to certain kinds of work was clearly shown. In general the best results were obtained by using the largest equipment that could be conveniently operated within the limits set by the size of the opening, and some machines were not reported to be successful because they were not large enough for the work required of them, whereas the same machines were highly successful in smaller openings. In the same way some expensive machines were found to have too large capacity for drifts and small stopes, where a large enough supply of ore could not be broken or an adequate car supply maintained, and were consequently considered to be unsuccessful. The same machine under more favorable conditions in other places, where the amount of ore broken was large enough and the material was taken away as fast as loaded, were reported to be highly successful. It is easy to see that a machine with a capacity of 60 to 100 tons per shift would be a failure in a heading where 100 tons ought to be cleaned out in four hours, but might be a great success in a drift where only 30-40 tons is broken at a blast. Part of the prejudice that exists at some mines against loading machines is due to attempts such as these to make the machines do work for which they were not adapted, and one of the benefits of the standardization campaign should be the avoidance of such mistakes in the future.

Great Variation in Car Sizes

The greatest differences in equipment reported were in the size of the cars serving the loaders and in the gauge of the track. As experience has shown that car service is at least half the problem of mechanical loading, the necessity for setting standards for underground transportation is immediately apparent. The recommendations of the committee on standardization of underground transportation are therefore awaited with unusual interest, particularly because the height and capacity of cars have such an important bearing on the output from mechanical loaders. Cooperation between the committees will be most beneficial and compromises may be necessary, for the car best suited to hand-tramming is not the best car for mechanical loading. In mines where trammers work singly cars must be small, not over 1¼-ton capacity, and where two trammers work together a 2½-ton car is as large as can be handled effectively; but the best results from mechanical loaders are obtained with cars of large capacity. For mines without mules or mechanical haulage, therefore, there must be a compromise between capacity and portability. The best cars for mechanical loading are low and wide, and should be as large as can be conveniently handled, for it has been found that, except in the unusual case where a train can be pulled by the loader, as in steam-shovel practice on surface, it takes just about as long to switch a small car as it does to fill it. As it takes very little longer to switch a large car than a small one, the capacity of the loader can be materially increased by increasing the size of the car. The height of the car is limited by the height which the loader will clear in operation, and usually should not exceed four feet. The capacity of the skip or cage and the width of the drifts will determine the other dimensions. The standardization of car dimensions is a matter of great importance to both manufacturers and operators, and should be of great benefit to designers and builders of loading machines.

The Question of Personnel

The question of personnel also needs attention, as the size of the crews employed in different mines varies greatly even in the same district. Experience alone will tell what is the best practice, but the following rule will generally apply: A small crew means lower cost per ton and a larger crew means larger output from the machine at higher labor cost. Where speed of operation, as in tunnel driving, receives the most consideration the crew should be large enough to keep the machine working as much of the time as possible, but in stoping the crew should be small. In every district where loaders are being used certain standards of personnel are being worked out along these lines, and will soon be recognized and adopted, as has already been done in steam shovel operation.

There is one point in the standardization of loading machines upon which I have not touched. That is the use of standard pipe-fittings and connections, bolts, studs, etc., and electrical apparatus. In times that fortunately have gone by it was the custom for manufacturers to use special threads and special fittings on their machines, so that the purchaser would have to come to them for repairs; but the manufacturers of loading machines have recognized the value of standardization for themselves as well as for their customers, and now practically all parts that can be so made conform to the standards of size and shape already established in this country.

COAL EXPORTS SHOW DECREASE

Domestic exports of both anthracite and bituminous coal are running below the mark which they held during the year 1921, according to reports compiled by the Department of Commerce.

The effect of the strike is clearly indicated in the drop of bituminous coal exports from 1,443,091 tons during April, 1921, to 714,995 tons during April, 1922, the falling values being from $9,135,378 to $3,479,041. Comparison of bituminous exports for 10 months ended April, 1922, with a similar period ended April, 1921, show a decrease from 28,609,077 tons to 12,095,699 tons, resulting in a decrease in value from $268,093,628 to $63,101,455.

Anthracite coal export for April, 1922, amounted to 109,290 tons valued at $1,057,378, as compared with the April, 1921, figures of 368,534 tons valued at $3,993,296.

ADDITIONAL HEARINGS ON MINING LAW REVISION TO BE HELD BY HOUSE COMMITTEE

FURTHER consideration of the mining law revision bill by the House committee on mines and mining probably will await a crystallization of opinion of members of the industry which is expected to result from the mining conference to be held by the American Mining Congress in Denver, June 21 and 22. The committee possesses the views of the framers of the measure, who appeared during hearings recently held. After witnesses present the opinions of the western mining men at further hearings, the committee will have a sufficient amount of data to enable it to proceed with the work of attempting to revise the measure so that objectionable features will be eliminated. Unless this can be done, say those in charge of the bill, no effort will be made to urge further legislative progress, all concerned having agreed that the bill is not acceptable in its present form.

Criticism is Summarized

Director Bain, of the Bureau of Mines, in his testimony before the committee summarized the criticism of certain features of the pending bill, crediting opposition to a desire to cling to conservatism, precedent and practice. Although he stated that there is little opposition to the revision in whole, he cited the need of some changes in the code.

Citing a parallel case, Dr. Bain referred to the revision of the oil land law and the opposition which was encountered during its consideration. He pointed out that oil formerly had been developed under the gold placer law, and that criticism of attempts to change this system died away after the oil men became accustomed to operation under the oil leasing law, which now is working so satisfactorily as to leave no inclination to return to the old code.

Dr. Bain said the present law on lode claims is in many particulars as satisfactory as was the gold placer law to oil development. Replying to Chairman Rhodes, the Director stated that the pending bill did not possess his unqualified support as certain details should be changed to meet opposition.

The views of those who framed the measure were presented to the committee by W. R. Ingalls, of New York, chairman of the committee which prepared the bill. Mr. Ingalls' opinion coincides with that of Dr. Bain in the expression that the bill is not suitable for enactment in its present form.

Basis of Present Laws

Mr. Ingalls said the existing laws were founded on the theory that the discoverer of a vein should have the right to follow it wherever it might go. Some clauses of the present laws have been abolished by common consent following controversy over interpretations of the law and court litigation. This has resulted in disregard by agreement in almost every important mining district of the essential features of the present law. He said that agitation for revision of the mining laws began about 1895 when it was inspired by the controversies and litigation involving the waste of money and seriously hampering the mining industry.

In reply to Representative Wingo, Arkansas, who expressed surprise that the extra lateral law had become a dead letter, Mr. Ingalls pointed out that the measure was framed when knowledge of ore deposits was imperfect. Representative Colton, Utah, and Arentz, Nevada, were not inclined to accept the view that disregard of the extra lateral law was prevalent.

In outlining the principal changes embodied in the proposed revision, Mr. Ingalls described the bill as repairing an old house instead of building a new one, stating that the pending measure was the fifth draft prepared by the committee.

Chairman Rhodes questioned Mr. Ingalls on the basis of protests against the bill received by the committee. Mr. Ingalls stated that he was not aware of a change of sentiment in mining regions since the bill was presented a year ago. Questioned as to whether the measure reflects the majority view of all engaged in the mining industry, Mr. Ingalls said the presentation of the bill was for the purpose of eliciting criticism and that such criticism as had lately developed did not defer materially from that presented during previous considerations given the measure.

Bill Needs Many Changes

Mr. Ingalls' ideas regarding the bill were crystallized when he replied to Mr. Rhodes' question asking him if the committee would be justified in its present form. "No," replied Mr. Ingalls, "because of extensive objections to the provisions requiring location in conformity with the public land surveys. While our committee believed that was the best method, we feel it is immaterial that the industry does not want it." Mr. Ingalls stated that the mining industry was almost unanimous in calling for the abolition of the apex and extra lateral laws and for repeal of the law making discovery necessary to location.

Mr. Rhodes pointed out that the majority of those communicating to the committee objected to passage of the bill, and that in view thereof the committee would be compelled to report it unfavorably unless it was modified to meet these objections. He asked if prospectors had expressed their opinion on the bill. Mr. Ingalls said no classification of groups had been made, the engineering committee having taken a broad view of the question of what was best for the welfare of the mining industry.

Mr. Rhodes said that some protests to the committee were to the effect that notwithstanding the intricate and complex features of the apex law, its continuance was desired because of its long use, rather than that it be discarded for a better plan that might carry new complications. Another group held that the apex law was impracticable and that Congress was justified in passing a sweeping revision of the mining laws so as to eliminate the apex and other existing laws which were considered objectionable. Mr. Rhodes said the opinion of the committee was equally divided and that the preponderance of evidence lay with those desiring the revision.

HOOVER URGES COAL OPERATORS TO ADOPT POLICY OF "SELF DENIAL" DURING EMERGENCY

By Ira L. Smith

THE GREAT STRUGGLE by coal operators to reduce the costs of coal production and by the miners to keep costs up to war levels has now ended its second month. Conservative operators have looked with grave concern upon every hint that the government might be induced to intervene. The possibility of a runaway market growing out of strike conditions and the adverse public sentiment which might result has been regarded as one of the dangerous symptoms.

It probably was with these facts in mind that Secretary Hoover two weeks ago opened a campaign to prevent this adverse condition.

His first move in this direction came when he deftly transformed a situation incidental to the strike into an opportunity to cast a challenge at the operators of producing mines. Taking advantage of the presence of forty-two operators at a meeting called to consider reports of coal profiteering, Mr. Hoover served notice that the coal industry must govern itself if regulation of its affairs by the government is to be avoided.

After proposing the Garfield war-time prices as a basis of control to prevent profiteering, he asked members of the industry to indulge in this "self-denial" for the purpose of "assuring the public of fairness." He placed acceptance of this plan in the light of "a demonstration to the public that the industry is capable of governing its own affairs, without necessity of federal regulation."

"Unless industry can govern itself, and we are proposing self-government, then the government will govern industry," Mr. Hoover declared.

"It is therefore in the interest of the operators that we are endeavoring to build up constructive action that will lead to freedom of business from government. I am one of those who do not feel that government should ever extend its arm into private business except where public interest has become the dominant note, and that private business must always give way to public interest."

Mr. Hoover gained approval by the meeting of the following plans:

1. Establishment of a central standing committee in Washington to be composed of representatives of the operators and government officials to advise upon the coordination of coal distribution between districts during the period of the present emergency, at the termination of which the entire plan is to be discarded.

2. Formation in each district of a committee to coordinate distribution and to cooperate with the standing committee, mainly for the purpose of preventing unnecessary competitive bidding and to eliminate speculation in coal by efforts to halt the practice of reconsignment of coal.

3. Adoption of the Garfield prices as the basis for computing sales prices with such adjustments as are necessary to meet such changed conditions as to costs and other factors, as will be fair to the public and the operators.

These proposals ordinarily would have brought objections from the operators because of doubts as to the legality of such a price control system, and also because many operators have been anticipating a rise in prices to offset the losses which they have incurred by running their mines during the "lean" months of the recent past.

HERBERT HOOVER

Credit for the fact that these objections were not pressed at the conference belongs to the masterly manner in which Mr. Hoover had set his stage before ringing up the curtain. When the time came for the operators to take action on the proposition, they found themselves in a position which made it impossible for them to do anything else but accept the plan, even had they been inclined to do otherwise.

Much secrecy had attended the calling of the meeting, and all those who were invited were enjoined against allowing news of the action to escape them. Suddenly, on the night before the conference was to assemble, the policy was changed. The entire matter was made public property on the following morning.

It is in this sudden change that close observers profess to see evidence of the care with which Mr. Hoover laid his plans so as to place the operators in such a position that they could not object seriously to his proposals. He had been giving consideration to the matter for a much longer time than is generally supposed, evidently waiting to seize upon the first reports of profiteering as a chance to "put across" something of far broader scope than the mere holding of prices to a low level during the strike. Apparently it was his first intention to hold the meeting behind closed doors so that he might be able to make his points clear without having to spare any words or depend upon the inferential methods which so often must be employed in open sessions. It appears, however, that he decided at the last minute that a broadcasting of the entire matter would bring in the factor of public opinion as an additional leverage to help him gain his points. Whether or not these deductions are entirely correct, it is a certainty that the meeting followed pre-determined lines very closely.

After the conference adjourned, however, it became apparent that Mr. Hoover was growing skeptical of the final success of his program, mainly because it had been accepted by only forty-two operators who were acting as individuals rather than representatives of groups of their

fellows, whereas a total of fifteen hundred operators are producing coal during the present period and would have to give their consent before the proposals could actually be put into effect.

It was determined to gain the opinions of these fifteen hundred operators as speedily as possible. Accordingly, there was issued almost immediately a call for a second conference to be held May 31, following the conventions of the National Coal Association and the West Virginia Coal Operators Association, and thus allowing opportunities to large numbers of operators for conferences on the subject.

It early became evident that many operators would hesitate to accept the plan as it was adopted at the first conference, and that a large portion of this hesitancy would be traceable to doubts of legality of price-fixing activities, regardless of whether the government had a hand in the plan.

The situation immediately brought to the fore the vital issue of whether an act which has been held to be illegal can take on the light of legality through being practiced in an effort for the public welfare. The issue is a large one, and close students of the situation profess to see no machinery in the government at present that possesses the authority to exempt from provisions of the anti-trust laws such organized controls as are calculated to maneuver prices so as to keep them at any level, even though it be sought to hold them at a minimum in the interests of the public.

This question of the right of industrial combinations to control prices in the manner planned by Mr. Hoover was discussed at length during the conference two weeks ago, and it later was announced that the plans would be submitted to the Attorney General for his opinion and comment.

Touching on this phase, Mr. Hoover told the conference that he had the feeling after discussion with Attorney General Daugherty that cooperative action to reduce and hold down the price of coal is in the public interest, inferring that this fact placed it beyond the realm of the provisions of laws designed to prevent price-control.

Although Mr. Hoover stated with some degree of certainty that the proposed plan involved no illegal actions, it is interesting to note that he set forward the idea of having a representative of the Department of Justice sit with the central committee in Washington "in order that everyone should feel assured." He added that "if it is thought desirable or necessary" the Attorney General might find someone to work with the committees in the districts "so that there can be no feeling that the public interest is not being protected."

This entire phase of the situation is reminiscent of one of the plans for a Federal Trade Commission which was discussed in the early stages of the idea's development. This measure would have granted an agency of the government the authority to interpret the law in cases such as that embodied in Mr. Hoover's plan, with the power to approve of acts of this type where they were carried on for the public good, although a strict clinging to the intent of the law would stamp them as being illegal. At that time Congress did not approve this proposal.

Even if the legality of the proposed price-control be established beyond all doubt and to the entire satisfaction of those who would have the most to fear were they to indulge in an act, the legality of which might be questioned, Mr. Hoover's plans find themselves faced by an obstacle forming perhaps an even greater handicap to achievement of success. Operators who have been losing money during the "lean" months of the past year and a half are not greatly enthused over the idea of seeing what they had anticipated as a chance to legitimately recoup their fortunes go vanishing. As pointed out during the meeting, many of these operators have been running their mines at a loss for months, solely for the purpose of having them ready for operation at the time that an emergency would arise and the highest possible potential production would have to stand ready to supply the country.

AT A KILLING PACE

—From the Louisville Courier-Journal.

One of the most interesting developments of the meeting was the clarity with which existing situations were portrayed and possible remedies debated during the course of discussion between the operators and the Secretary.

Of specially high value was the expression of views concerning speculation in coal during periods when a shortage is imminent or already exists. In the simple statement that cars should not leave the mine without being consigned directly to the consumer or actual distributing agent is seen a suggestion that probably will materialize into one of the principle policies of any machinery designed to prevent speculation.

Another means was suggested of preventing profiteering and thus eliminating reflections being cast upon the vast majority of operators who are content with prices that will balance up losses of dull periods and afford a fair margin of profit, the proposed plan being that where the price of coal bore an excessively high price when it reached the consumer, that coal be traced back through its transportation and to its original consignment to discover where the unfair price had been added.

The statement by a jobber that he knew of coal being held on the tracks in Pennsylvania by an operator who wanted $6 a ton for his product brought statements from representatives of many districts who declared that there was little if any demand being made by operators for prices of that magnitude, and caused Mr. Hoover to make the following comment:

"I have heard no report of any $6 coal from the

mines. There are some shipments of coal that we have traced back to the mine that have been sold at the mine at $2 and pyramided. That is one thing we want to clear up.

"The matter of pyramiding coal by jobbers depends upon the buying of coal and reconsigning it a number of times. The railroads have it within their power to stop that process. Sometime ago I understood that the railroads of Pennsylvania would not allow coal to be hauled for reconsignment. If that privilege were made so expensive it would not be profitable, it would have to stop.

"I agree that self-preservation is the first law of nature. While I contemplate the whole range of danger we are all in, there are other dangers beside a fall in the price of coal, and we have to consider all the phases. I do not anticipate and hope that there will be no runaway market in coal."

LIST OF CONFEREES

The list of those who were present at the first conference, as compiled by the Department of Commerce, includes the following names:

D. B. Wentz, President, Stonega Coke & Coal Co., Philadelphia; C. E. Bockus, President, Clinchfield Coal Corporation, New York; Erskine Ramsay, Vice-President, Pratt Consolidated Coal Co., Birmingham, Ala.; E. C. Mahan, President, Southern Coal & Coke Co., Knoxville, Tenn.; Alex. Bonnyman, President, Blue Diamond Coal Sales Co., Knoxville, Tenn.; L. C. Crewe, President, LaFollette Coal & Iron Co., LaFollette, Tenn.; E. L. Douglass, Vice-President, First Creek Mining Co., Cincinnati, Ohio; C. W. Connor, Elkhorn & Shelby Creek Coal Co., Esco, Ky.; Henry LaViers, Southeast Coal Co., Paintsville, Ky.; A. D. W. Smith, Southeast Coal Co., Philadelphia, Pa.; C. F. Richardson, President, West Kentucky Coal Co., Sturgis, Ky.; S. Pemberton Hutchinson, President, Westmoreland Coal Co., Philadelphia, Pa.; Julian B. Huff, Keystone Coal & Coke Co., Philadelphia, Pa.; T. W. Guthrie, President, Hillman Coal & Coke Co., Pittsburgh, Pa.

J. B. Brunot, Vice-President, Irwin Gas Coal Co., Greensburg, Pa.; B. Dawson Coleman, Nant-Y-Glo Coal Mining Co., Philadelphia; W. D. Ord, Roanoke Coal & Coke Co., Landgraff, W. Va.; T. B. Davis, President, Island Creek Coal Co., New York; J. D. Francis, Vice-President, Island Creek Coal Co., Huntington, W. Va.; W. H. Cunningham, Gano Moore Coal Mining Co., New York; R. H. Gross, President, New River Co., Boston; J. C. McKinley, President, Richland Mining Co., Wheeling, W. Va.; Walter R. Thurmond, Argyle Coal Co., Logan, W. Va.; E. E. White, President, E. E. White Coal Mining Co., Glen White, W. Va.; Justus Collins, Winding Gulf Colliery Co., Winding Gulf, W. Va.; G. H. Caperton, President, New River Coal Co., Charleston, W. Va.; W. P. Tams, Guyan Collieries Corporation, Tams, W. Va.; P. M. Snyder, East Gulf Coal Co., Mt. Hope, W. Va.; C. C. Dickinson, Dry Branch Coal Co., Charleston, W. Va.; R. R. Smith, Stone Branch Coal Co., Huntington, W. Va.; Walter Barnum, Treasurer, Pacific Coast Co., New York; A. W. Galloway, President, Davis Coal & Coke Co., Philadelphia.

Cadwalader Jones, Vice-President, Big Elkhorn Coal Co., Ashland, Ky.; J. G. Bradley, Dundon, W. Va.; Geo. Otis Smith, Director, U. S. Geological Survey; E. A. Holbrook, Acting Director, Bureau of Mines; E. L. Greever, Pocahontas Operators' Association, Bluefield, W. Va.; E. M. Postin, President, Interstate Coal & Dock Co., New York; C. H. Mead, Vice-President, Low Volatile Consolidated Coal Co., Beckley, W. Va.; C. E. Heller, Donohoe Coal Co., Greensburg, Pa.; C. H. Jacobs, Wise Coal & Coke Co., Philadelphia; F. W. Wilshire, Consolidated Coal Co., New York; G. B. Seyms, Westmoreland Coal Co., Philadelphia; W. E. E. Koepler, Pocahontas Operators' Association, Bluefield, W. Va.; C. J. Neekamp, N. E. Kentucky Coal Association, Ashland, Ky.; R. H. Aishton, President, American Railway Association, Washington, D. C.

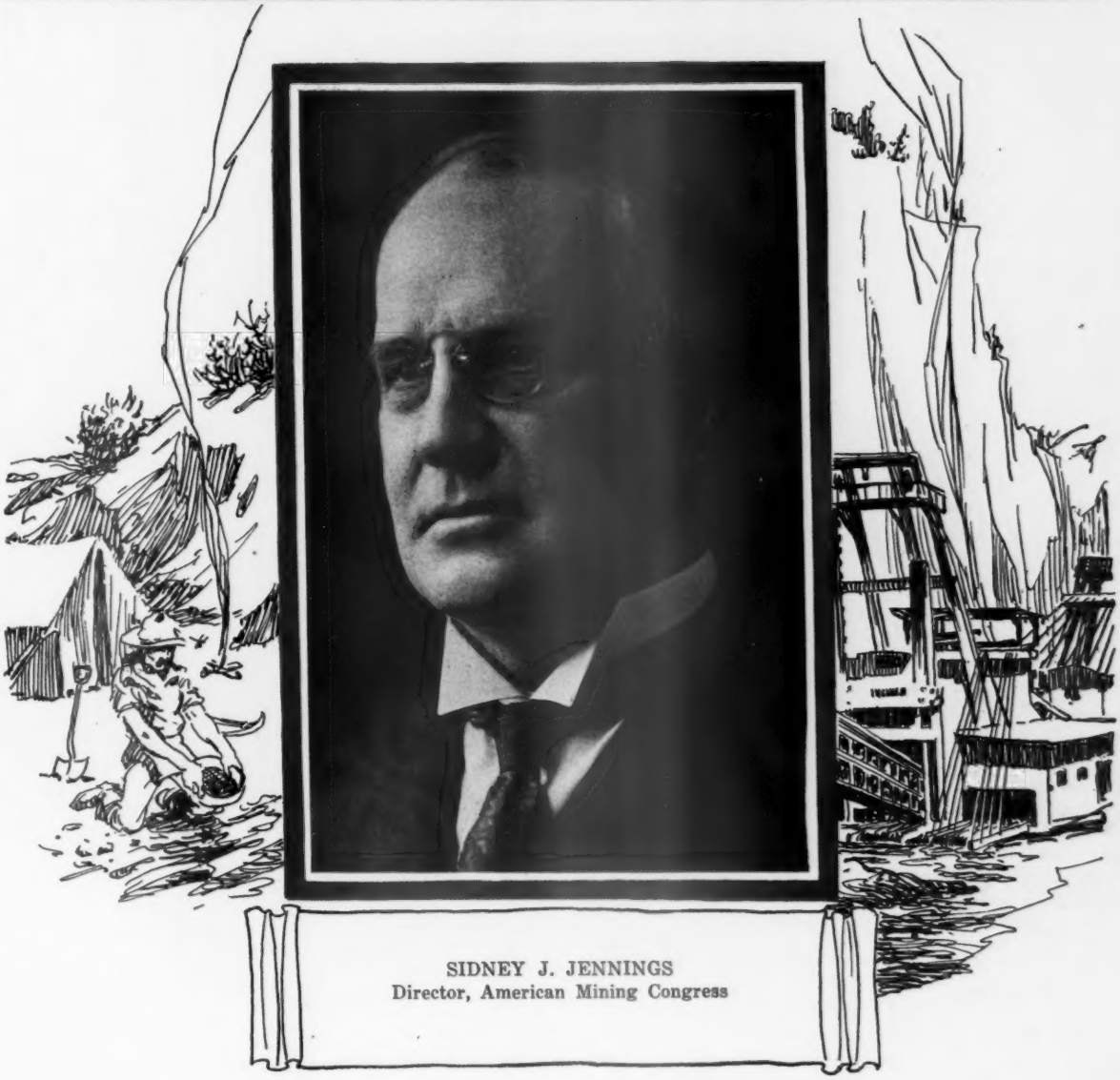
MANY COAL MINE ACCIDENTS PROBABLE WHEN WORK RESUMES AFTER STRIKE

RESUMPTION of coal mining activities in general throughout the country at the termination of the present strike may result in a surprising number of accidents to miners during the initial period of resumed activities, according to experts of the Bureau of Mines, who point out that special caution to prevent this increase in accidents which naturally will follow the interruption to normal safety measures and training and the lessened morale unless offsetting steps are taken.

During the first quarter of the current year 566 men have been killed at coal mines, as compared with 494 during the corresponding quarter last year, an increase of 72 fatalities, or more than 14 percent. The output of coal for the same periods was 150,923,000 tons and 124,030,000 tons, respectively, an increase in 1922 of about 22 percent. The increased production has resulted in a decline in the fatality rate per million tons mined from 3.98 in 1921 to 3.75 in 1922.

If the causes of the fatalities during the three months, January to March, be considered in relation to production of coal, the reports show a decrease in the per-million-tons fatality rates for nearly all of the main causes of accidents. A conspicuous exception to this statement is in explosion of gas and dust, for which the fatality rate per million tons has increased 173 percent over the first three months a year ago and 156 percent over the rate for the entire year 1921. These increases occurred in explosions caused by shots and those caused by electric arc.

According to Dr. Arthur L. Murray, surgeon of the United States Bureau of Mines, the monetary losses due to accidents and contagious diseases in the coal mining industry of the single state of Utah average close to a million dollars per year. In Dr. Murray's opinion, Utah is not an exceptional state in this respect, and he considers that in many other coal mining states the conditions are equally as serious. A serious outbreak of a contagious disease, especially typhoid fever or smallpox, during a period when the demand for coal is good may be the means of placing a large proportion of the operating force on a nonproductive basis and so cripple a mine as to change it from a profitable undertaking to one showing a loss, says Dr. Murray in Serial 2345, "The economic relation of accidents and preventable diseases to the coal mining industry," just issued by the Bureau of Mines.



SIDNEY J. JENNINGS
Director, American Mining Congress

MR. JENNINGS has been prominently identified with the mining industry in the United States and in Europe for many years, his early career beginning with his affiliation with the New Alameda Quicksilver Company, of California, and the Anaconda Copper Mining Company. He has been vice-president of the United States Smelting, Refining and Mining Company since 1908, and is a director of several well-known mining companies. Mr. Jennings was elected to the Directorate of The American Mining Congress in 1921.

FRED COWANS
Governor, American Mining Congress
State of Utah

MR. COWANS, recently elected Governor, Utah Chapter, The American Mining Congress, was one of the organizers of the Chapter in 1917. Since his graduation from McGill University, he has been connected with the mining industry of the Western United States, British Columbia, Mexico and South America. Mr. Cowans is general manager of the Utah Consolidated Mining Company, which position he has occupied since 1910.

WAR MINERALS DECISION IN KEY CASE MAY REOPEN LARGE NUMBER OF CLAIMS

MANY WAR minerals relief claims will be reopened and the sum total of the government's payments to claimants greatly increased if the Department of the Interior follows what seems to be a likely course of action in dealing with cases where several enterprises involved in claims are owned by the same corporate interests.

Ruling by Fall Expected

It is expected that Secretary Fall will decide that where the same interests own a property that was developed prior to the war and one that was developed under stimulus but proved a losing enterprise, the profits of the first cannot be set up against the losses resulting from the second in arriving at a decision. Secretary Lane ruled that profits from the first enterprise could be applied against losses sustained in the second, with the result that there would be no losses for the government to take cognizance of in disposing of the case. This ruling was arrived at by application of the principle that "the individual and not the enterprise is stimulated," and that if one enterprise was stimulated, the other also was the subject of stimulation. Secretary Payne qualified this ruling by deciding that the profits of one operation could not be applied against the losses of the other except in cases where there was a corporate entity; in other words, where exactly the same persons held exactly the same interest in both enterprises.

The legal branch of the Department of the Interior has been considering this matter for some length of time. the primary issue being whether it is legal to offset losses of one operation by profits from another in arriving at the amount of an award.

The entire issue rests in the key case of the Western Rock Properties Company, of California, which was submitted by Commissioner Robinson to Secretary Fall about three months ago.

When this issue is settled, the major precedents required as a basis for disposition of the large number of pending claims will have been obtained. The department has adopted the policy of making no awards in cases where claims are based upon requests for compensation for purchase price, or in cases where it is sought to regain expenditures for a lease, which is characterized as a temporary purchase. No award is being made where claims are based upon salaries paid to partners or owners, the department taking the position that if profits had resulted these persons would have benefited.

The question of stimulative character of published appeals is one that hardly can be covered by a blanket policy because of the variation presented by individual cases.

Recommendations on the following cases were made by Commissioner Robinson during the month ending May 15:

Awards Recommended by Commissioner

C. H. Hawkins, San Francisco, Calif. Claim formerly denied because of no request or demand to produce. Stimulation and commercial importance now established. Award of $867.51 recommended. Affirmed by secretary May 5.

W. C. Peters, Etna Mills, Calif. Stimulation established under amended act. Award of $378 recommended.

Allen-Oden Ore Co., Birmingham, Ala. Stimulation established under amended act. Award of $993.85 recommended.

Continental Mining & Royalty Co., Mena, Ark. Stimulation established under amended act. Award made on commercial importance shown by one of twelve properties. Award of $395.78 recommended.

Alexander E. Hook, Stockton, Calif. Stimulation established under amended act. Award of $888.70 recommended.

Smith, Starr and Gunnell, Grants Pass, Oregon. Stimulation established by claimant and affidavits of expenditures accepted by commission. Award of $270 recommended.

Green, Mattos and Volonte, Castella, Calif. Earlier date of stimulation established. Additional award of $806.64 recommended.

Frederick Kohlmeyer, Deming, New Mexico. Stimulation established under amended act. Award of $1,414.71 recommended.

C. H. Hawkins, San Francisco, Calif. Earlier date of stimulation established. Award of $824.76 recommended for additional losses, fixed by government auditor.

August Dupzyk, Hornbrook, Calif. Stimulation established under amended act. Award of $187 recommended.

Disallowance Recommended

V. E. Gillette, Prairie City, Calif. Property not of commercial importance.

A. E. Hanenkrat, Prairie City, Oregon. Disallowance recommended because other war-time operations showed profits sufficient to offset loss sustained in this operation.

H. Sardy and C. E. Noble, Grants Pass, Oregon. Operations resulted in profits after disposing of property.

Paramount Metals Co., Cleveland, Ohio. Expenditures were for forming of corporation, sale of stock, etc.

P. C. Black, trustee. No stimulation established.

Robert Eikelman, Custer County, Colo. Claim formerly denied, and in request for rehearing claimant presented no further evidence.

J. A. Faucher and A. S. Hughes, Oakland, Calif. Claim of no commercial importance.

Mrs. Dorothy Moffitt, Gillette, Wyo. Claim wholly for purchase of property.

O. A. Avery, Fresno, Calif. Claim wholly for purchase of property.

MINERAL TARIFF SCHEDULES BILL CREATE MARKED DISCUSSION IN SENATE

THE DISCUSSION on tariff schedules which affect the mineral industry has been marked in Senate debate. Few of the schedules have been voted on, however. The manganese schedule particularly crops up in debate every day or two. Senator Oddie and Senator Pittman, both of Nevada, have made vigorous presentations on behalf of free cyanide. The vote on this item is awaited with deep interest. It has been delayed from its regular order and the time of taking the vote is still uncertain.

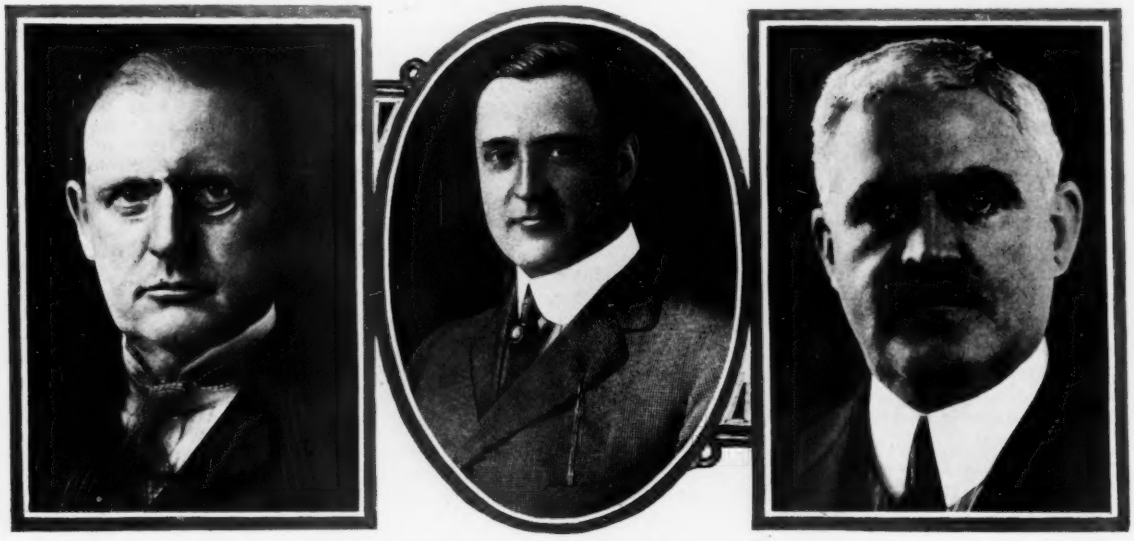
So far the western tariff bloc has shown decided solidarity in the issues which it has agreed to support.

The vote on the Shortridge amendment to increase the duty on quicksilver from the rate of 25 cents per pound provided by the Senate finance committee to the rate of 35 cents per pound provided by the Fordney tariff bill resulted in the defeat of the proposed amendment which leaves before the Senate the rate provided by the finance committee, namely, 25 cents per pound.

The committee rate of 2 cents per pound on antimony as regulus or metal was adopted after objection by Senator Jones, New Mexico, who said that while the antimony industry, including oxide, deserves more attention than it has been receiving, this country cannot build up the industry of smelting the ores.

The Senate also adopted the duties recommended by the finance committee on lime, limestone, plaster, rock or gypsum, pumice stone, and bauxite. The duty of $3.25 per ton on fullers earth was adopted after the Senate rejected an amendment by Senator Jones to reduce it to $1.50 per ton.

CLEVELAND'S CIVIC LEADERS JOIN FOR SUCCESS OF MINING CONGRESS CONVENTION



OFFICERS OF THE GENERAL CLEVELAND COMMITTEE

Left to Right: John A. Penton, Penton Publishing Company, vice-chairman, Cleveland committee; Richard F. Grant, M. A. Hanna and Company, chairman, Cleveland committee; Michael Gallagher, president, Pittsburgh Vein Coal Operators Association, chairman, speakers committee.

CLEVELAND is living up to its name as the best convention city in the United States, for the business leaders of the community are giving their full support and whole-hearted cooperation in order to make the Twenty-fifth Annual Convention and Exposition of Mines and Mine Equipment of the American Mining Congress to be held in the Public Hall at Cleveland, October 9-14, 1922, the greatest possible success.

Two representative committees have been formed to assist in carrying out the plans for this convention and exposition—a general Cleveland committee consisting largely of prominent iron and coal mine operators which will advise in connection with the plans for the convention—and the exposition committee consisting of manufacturers who will cooperate especially in connection with the plans for the exposition.

The first meeting of the general Cleveland committee was held at the Union Club in Cleveland on Friday, May 12. Richard F. Grant, of the M. A. Hanna and Company, was elected chairman of the committee; John A. Penton, of the Penton Publishing Company, vice chairman, and Michael Gallagher, president of the Pittsburgh Vein Coal Operators Association, chairman of the speakers' committee. The other members of the general Cleveland committee are: A. A. Augustus, president, Cambridge Collieries Co.; S. H. Robbins, president, Youghiogheny & Ohio Coal Co.; T. K. Maher, president, Maher Collieries Co.; W. R. Woodford, president, Rail & River Coal Co.; C. E. Maurer, president, Glens Run Coal Co.; Carmi A. Thompson, Tod-Stambaugh Co.; Crispin Oglebay, Oglebay-Norton & Co.; Elton Hoyt, 2d, Pickands, Mather & Co.; Henry A. Raymond, Cleveland Cliffs Iron Co.; Fayette Brown, Harvey H. Brown & Co.; Claude J. Peck, Shenango Furnace Co.; Newton D. Baker, president, Cleveland Chamber of Commerce; A. C. Brown, president, Brown Hoisting Machinery Co.; F. B. Richards, president, Lake Superior Iron Ore Assn.; J. J. Bernet, president, New York, Chicago & St. Louis Rwy.; Charles E. Adams, president, Cleveland Hardware Co.; Benedict Crowell, Crowell & Murray; Charles Briggs, Calumet & Arizona Copper Co.; Frank B. Fretter, president, National Refining Co; and John A. Kling, president, Kelly Island Lime & Transport Co.

Plans were adopted at this meeting which will not only bring the leaders of American public and industrial life to Cleveland as speakers on the convention program, but will lead to a greatly increased attendance of the practical operating mine officials at the exposition. A special effort will be made by the members of the committee to bring home to mining men in all parts of the country the immense value of this exposition of mines and mining equipment as a means for studying the latest types of mine machinery and mine equipment. As a result of the cooperation of this influential committee, it is believed that the attendance at Cleveland will be more than double that of any previous meeting of the American Mining Congress.

Equally important in assuring the success of this great national meeting of mining men in Cleveland will be the work of the Exposition Committee. This committee was organized on Wednesday, May 17. Mr. Charles E. Adams, of the Cleveland Hardware Company, one of the best known men in Cleveland, was elected chairman of the Exposition Committee. The other members of the committee are Edwin S. Church, of the Wellman-Seaver-Morgan Company; George H. Hall, of the Cleveland Rock Drill Company; H. B. Bole, of the Hydraulic Steel Company; Frank A. Scott, of the Warner & Swasey Company; S. W. Wright, of the Atlas Car and Manufacturing Company; M. P. Reynolds, of the W. S. Tyler Company; James R. Mills, of the Carnegie Steel Company; John Andrews, Jr., of the Westinghouse Electric and Manufacturing Company; C. J. Hanley, of the General Electric Company; W. E.

COOPERATING TO MAKE CLEVELAND CONVENTION A GREAT SUCCESS

Left to Right: W. R. Woodford, president, Rail and River Coal Company; Charles E. Adams, Cleveland Hardware Company, chairman, exposition committee; Charles E. Maurer, president, Glens Run Coal Company

Huber, of the Electric Railway Improvement Company; A. S. Gould, of the Oster Manufacturing Company; A. E. Reed, of the W. S. Tyler Company; H. L. McKinnon, of the Bartlett & Snow Company.

The purpose of this representative committee of influential Cleveland manufacturers will be to assist the convention and exposition management in connection with the plans for the exposition in such a way as to assure every exhibitor participating in this great national exposition fair treatment and satisfactory conditions. It means a great deal to each exhibitor and to the convention and exposition management to have the full support and hearty cooperation of these influential men in arranging the plans for the exposition.

The Cleveland Public Hall which was formally opened for the Building Exposition in Cleveland is undoubtedly one of the finest and most modern buildings of its kind in the world. The building is designed in the Italian renaissance style of architecture and is of modern fireproof steel construction. The interior is faced with marble, tile and decorated plaster. Battleship gray is the predominating color. Scrolls and art work in pale blue adorn the balustrade which borders the balcony. The color scheme gives the interior a softness and warmth unusual in auditorium halls of such size.

One of the notable features of the auditorium is the method of illumination. The general auditorium, which has a seating capacity of 11,500, is artificially illuminated by a flood of soft light diffused through a field of glass panels in the ceiling. The stage, upon which the convention sessions will be held, will furnish an auditorium seating 1,100 persons and thereby making it possible to link together the sessions of the convention with the display of equipment and machinery on the exposition floors.

The lower floor, known as the Exhibition Hall, is unusually well equipped with every type of service equipment for the display of industrial exhibits. This hall is 121 feet 6 inches wide and 235 feet long, containing 28,553 square feet of floor space. The Exposition of Mines and Mine Equipment occupying both floors of the building will utilize in the neighborhood of 65,000 square feet of space.

The Exhibition Hall in the Public Hall at Cleveland is notable because of the service equipment which has been installed to secure the maximum efficiency and the widest range of usefulness to exhibitors displaying their products on this floor. Service stations attached to the building columns contain connections for hot and cold water, drainage, steam, gas, electricity for illumination and power, compressed air, vacuum and telephone. Adjoining the Exhibition Hall on the southern end of the building are two large conference rooms which can be used for group sessions or for moving picture display.

In addition to the two splendid exposition floors in the Public Hall at Cleveland there will be many other conveniences for exhibitors in connection with the use of the building. The building is thoroughly equipped with telephone booths, taxicab offices, ladies' and gentlemen's retiring rooms, shower baths, lockers, check rooms, telegraph station, a barber shop and every other modern convenience and requirement. Altogether there is hardly a question that the Cleveland Public Hall is the finest building of its character in the United States at the present time, and it should prove to be an ideal setting for the great industrial Exposition of Mines and Mine Equipment which will be staged there October 9-14, 1922, in connection with the Twenty-fifth Anniversary Convention of the American Mining Congress.

Under the supervision of John E. Miller, exposition superintendent, the American Mining Congress is constructing an entirely new set of booth fixtures. These

fixtures will be especially constructed to meet the requirements of the exhibitors at this exposition and the color effects which will be used in decorating these fixtures will be kept in harmony with the general design and with the colors used in the Public Hall. They will form an unusually attractive and decorative background for the display of industrial machinery and mechanical equipment.

In view of the fact that this great national meeting will celebrate twenty-five years of remarkable development in the mining industry, an effort will be made to arrange the convention sessions in such a way as to bring out effectively the importance of labor saving and cost reducing machinery in the development of the mining industry. In this way the entire meeting, which will have the advantage of being housed under one roof, will be linked together in an effective way and the delegates will have the opportunity not only of discussing and conferring in regard to methods which will tend to increase efficiency in the development of mining enterprises but also of studying the representative industrial exhibits on the floors of the exposition. As a matter of fact, the delegates at the convention frequently learn as much in regard to different phases of their particular problems by visiting the displays on the exposition floor as in the convention sessions themselves.

The executive headquarters of the American Mining Congress will be at the Hollenden Hotel which will also be the headquarters for the registration of delegates and for such sessions of the convention as may be held outside of the Public Hall. These will include the convention smoker which proved to be such an interesting event at Chicago and also the annual banquet which will be held Friday evening. The Hollenden Hotel is only a block and a half from the Public Hall and is ideally located from the standpoint of convenience for delegates making this hotel their headquarters.

From every indication which has been received up to the present time and with the hearty cooperation of the members of the Cleveland committees, it is believed that every participating exhibitor in the American Mining Congress will not only feel well satisfied with the exposition as a whole but will look forward to becoming a permanent member of the Manufacturers Division of this organization which has been created in order to develop a permanent manufacturing organization to direct and guide the further development of these annual meetings.

The convention and exposition management feels justified in the belief that this Twenty-fifth Annual Convention and Exposition will be an unusually notable and significant industrial event and in all probability will be the largest convention of this character which has ever been held in the United States.

TAX RULING ON AMORTIZATION

THE COMMISSIONER of Internal Revenue has determined and publishes the following ratios of estimated post-war cost of replacement for use by taxpayers in computing claims for tentative allowances for amortization. The allowances based on these ratios will be purely tentative and subject to redetermination in accordance with the provisions of the law; but are announced for the purpose of establishing uniformity as to the basis of claims. All ratio are expressed in percentages based on prices as of June 30, 1916:

The Commissioner has just ruled that the filing of a claim for amortization deduction in connection with the original return for the years 1918, 1919, 1920, or 1921, is a condition precedent to the right to take such deduction in any return under the Revenue Act of 1921.

Even though no claim for the deduction was made in connection with the original return for 1918, 1919, 1920, or 1921, a claim for refund or credit for taxes paid under the Revenue Act of 1918, based upon failure to take such deduction, may be allowed in accordance with the provisions of Section 252 of the Revenue Act of 1921.

A. Ratios for computing estimated post-war cost of replacement of buildings, vessels, cars, tanks, blast furnaces, open-hearth furnaces, annealing furnaces, electric furnaces, coke ovens, and construction of all kinds:

	Percent
1. Lumber—	
(a) Hard	240
(b) Soft	175
2. Structural steel	60
3. Building materials, other than lumber and structural steel	225
4. Steel (other than structural steel) and steel products	90
5. Building equipment	150
6. Labor (all classes)	160

B. Ratios for computing estimated post-war costs of replacement of machinery and equipment:

	Percent
7. Electrical machinery and equipment	130
8. Engines, turbines, compressors, and similar facilities	175
9. Pumps	135
10. Boilers	160
11. Transmission equipment—	
(a) Shafting, pulley, hangers, etc	135
(b) Belting	100
12. Machine tools and small tools (machine tools are considered as that class of metal-working machinery which can be used on both cast iron and steel)	130
13. Wood-working machinery	155
14. Textile machinery	155
15. All other machinery (including cranes)—	
(a) Machinery, the cost of which did not exceed 10 cents per pound as of June 30, 1916	120
(b) Machinery, the cost of which did exceed 10 cents per pound as of June 30, 1916	130
16. Office furniture and equipment	125

The 1921 Revenue Law provides that a reasonable deduction for amortization shall be allowed in the case of buildings and equipment added to properties on or after April 6, 1917, for the production of articles contributing to the prosecution of the war where the cost of such facilities has been borne by the taxpayer.

VALUATION OF NATURAL RESOURCES FORMS LARGE TASK FOR GOVERNMENT TAX EXPERTS

FAILURE to recognize, until recent years, the principle of wasting assets in the revenue laws of the country has led to almost disastrous results, according to H. L. Simcoe, Assistant Chief of the Natural Resources Division, Bureau of Internal Revenue. In addressing members of the Income Tax Unit on the technical work of the Natural Resources Division, Mr. Simcoe recently defined the principle which is peculiar to all natural resources in the following words:

"The mine operator who sells his metal or his coal is selling not only his product, but at the same time a part of his mine; and the apparent income for a given year's operations is part profit and part return of capital. The gross receipts must cover both."

H. L. SIMCOE

Mr. Simcoe believes that this phase of the taxation problem has long been recognized by economists and mining engineers, but not in revenue laws until recently, and even since its inclusion in the Federal laws, the amount allowed as a deduction for Federal tax purposes has varied in almost every law.

"Under the present statutes," he says, "this provision for wasting assets will be found on the liability side of the balance sheet under the name of 'Reserve for Depletion,' which may be set up on various basic dates, including a reserve on cost, March 1, 1913, value, and probably a discovery value. In a case of this kind the reserve account must be analyzed to distinguish what part is a real reserve and what part takes on the status of surplus and becomes capital. This reserve for replacement or depletion is becoming more and more important as time goes by for replacement costs are mounting in the direct proportion that good mines are becoming scarcer."

Accounting procedure in reckoning profits from the operation of a natural resource prior to the Federal income tax laws is almost ancient history now. Depletion was taken care of by the operator by deducting what was "put in" from what was "taken out," and very frequently the fact that what was "put in" exceeded what was "taken out" produced rude awakenings which saddened investors' hearts and left them with empty pocketbooks. Mr. Simcoe ably illustrates the uncertainties involved in mining ventures in the following paragraphs:

"The large exploration companies are offered hundreds of prospects for every one taken up. The report of a large mining company tells of 3,000 investigations and only one proved worth buying. Of course, each prospector thinks he has discovered a mine of untold wealth, but its wealth usually remains untold, and this suggests a very prevalent error to regard a mine as a mint and the ore as coin, whereas, the truth is, mining is a branch of manufacture and the ore is only the raw material and as such is subject to the uncertainties existing where it is situated, such as fuel and water for sustaining life and for light and power, the cost of living, the price of labor, means of reduction, transportation conditions, protection of law, and civilization generally.

"Innumerable instances can be cited where plants have been built to mine and prepare for market certain ore which turned out to be not marketable and of such a limited deposit the useful life of the plant was of short duration. The idle plants are now monuments to the hazards of mining. How much or how little ore is contained in the ground no one can tell until he spends much money to find out. Even then if it can not be mined at a profit the value is next to nothing. Its value lies in its ability to produce profits."

Calling attention to the fact that no depletion was allowed mining and oil operations under the excise tax law of 1909, although timber operations were given such an allowance, and that under the 1913 income tax law the same industries were again treated differently, the mines and oil wells being limited on their deduction for wasting assets to 5 percent of the gross value at the mouth of the mine or well, and no such limitation was placed on timber operations, Mr. Simcoe stated that these limitations sometimes make it difficult to explain to the taxpayer why he can not have depletion when it will help him, and why he is forced to take it for invested capital purposes in a year when it again hurts.

Another feature discussed by Mr. Simcoe was that of realized appreciation, which he states has been handled erroneously in the audit and by the taxpayers more often than any other item in mine accounting. "Whether there is any realized appreciation to be added to surplus for invested capital purposes," declares Mr. Simcoe, "depends entirely on how it has been treated on the taxpayer's books. If depletion is based on cost and deducted on cost, there is never any realized depletion to add to surplus for the surplus account is correctly stated. The realized depletion is automatically there."

He then outlined the valuation problems of the Natural Resources Division as follows:

"The law under which we are now operating says a reasonable amount shall be deducted for depletion. The word 'reasonable' becomes an enigma and if someone with a magic wand could give the answer our troubles would be simplified. Since practically all mining property was acquired prior to March 1, 1913, we are confronted mainly with the problem of establishing the value of the mine on that date, and perhaps in a considerable number of cases with the value under the clause relating to discovery since that date."

"The revenue law provides three ways of arriving at the value of a mining property: (1) the cost, if purchased on March 1, 1913, or later; (2) the fair market value, if purchased earlier than March 1, 1913; (3) revaluation in either of the other cases provided since March 1, 1913, or since purchased, subsequent to that date, a new discovery in unproven ground results in a value disproportionate to the value prior to the discovery."

"Regulations of the bureau for earlier years have outlined various ways in which fair market value as of March 1, 1913, may be reached. Most of these have been methods of indirection. Consequently, the old methods have not withstood the onslaught of a new school which has arisen and has given way to methods more direct and professional, i. e., engineering methods. By using strictly engineering methods it is possible for two sets of valuations to arrive at approximately the same results, i. e., by starting with the same facts there need be no great disparity in the results because practically all great natural resource companies have an engineering department."

Acquisition Value

"Practically all mines require a value as at acquisition for the reason that seldom are any mines purchased with cash but are acquired by an issue of stock. There probably could not be money enough pooled together by any group of men to purchase the Utah Copper Company which owns a whole mountain containing copper, or the Chili Copper Company whose metal in the ground is valued around 600 millions of dollars. The Cerro de Pasco has probably 600 million tons of ore containing silver and copper. The Great Northern Iron Ore properties, where is situated the largest mine in the world, are so large and valuable that the whole city of Hibbing, Minnesota, is being moved because it is located over a 200-foot vein of iron ore near the surface. Such properties change hands for stock for the reason given above. It will be understood, therefore, how accurate a method must be where such immense properties are under review. To give an idea of the success of the valuation work of the Natural Resources Division, it is not believed that there has been a single case taken to court on strictly a difference of opinion regarding the value of property turned in for stock or concerning a value as of March 1, 1913, for depletion purposes."

More Accurate Values Possible

"It is possible to much more accurately gauge values by transfers of nearby or similar properties in certain cases of oil and coal lands since these in recent years have been subject to rather frequent changes of ownership; but these methods, except in occasional instances, do not yield a safe basis for valuation of metal mining properties. Stock market quotations may, under some circumstances, afford a rough check for valuations arrived at by more direct methods; but these in themselves can ordinarily be given little weight for a variety of reasons. A stock market quotation is largely based on future prospects instead of present values. The anticipation of things which are likely to happen or not to happen causes wide fluctuations in a stock market but has nothing to do with real value. The attitude of the department in the past has been largely—what would a willing seller take for a property."

"The use of a transfer of *contingent* property as being synonymous with *similar* property often leads to controversy for the reason that a property may be adjacent to another and may not be similar in any respect. One may be on the structure and the other on the edge, or mining might not be feasible. This also applies in the oil districts, especially in what is known as a spotted field where one property produces oil in quantities and the adjoining property comes in dry. Similar property is probably more often found in the coal industry than any other deposit with the possible exception of dolomite or limestone. Any deposit which can be found in almost unlimited quantities has very little value for the reason of ease of replacements."

"Properties located in different sections of the country are totally dissimilar. For instance, the zinc mines of New Jersey produce a zinc oxide ore while the mines in the Joplin district contain a zinc sulphide. The sand deposits of New Jersey are vastly different from those of Illinois. The salt of Louisiana differs from that found in Michigan. The iron ore of Alabama would not be recognized as having any commercial value in the Lake Superior regions.

"A claim is often made by various industries for great value for their raw products on account of their proximity to a railroad, waterway, or an industrial center, using as an argument the great saving in freight rates; but this is offset by the rate of transportation on the finished product. There is an absolute division line beyond which many products of iron ore can not go on account of meeting the competition of another district. Some concerns have only foreign competition. But the location of practically all plants is made with some particular advantage in view, so if these questions were always features in valuation, the ramifications would be too intricate to follow.

An Erroneous Impression

"Inasmuch as the inception of valuation in the complex metals relies on factors such as tonnages and yield of ores which are necessarily but estimates and approximations at best, it might seem natural to conclude that all subsequent steps could with just as much permission be of only about the same accuracy. Such an impression if one exists is erroneous, for after the basis is established the answer is purely one of mathematics."

"A natural resource is worth a certain purchase price at any time prior to its exhaustion. As the natural resource is removed and sold the value of the property from which it is taken decreases, until, upon exhaustion, the value of the property as the container of a natural resource has become nil. The principle upon which an appraisal of a natural resource is based, when no other definite determination of its value is possible, is that a prospective purchaser shall have the price paid for it returned at a rate commensurate with its exhaustion; and, at the same time, receive a rate of interest upon his investment commensurate with the risk of loss incident to the investment."

"There are numerous methods of discounting to present worth, which are applicable to the various problems of valuation. The selection of a method depends upon the nature of the valuation to be made. The following examples, one a simple problem, the other complex, will illustrate how a value on a basic date may be arrived at:

"In the first instance, we will assume on March 1, 1913, there was a fully developed embloc tonnage of 1,000,000 tons under lease at 25 cents a ton, and a minimum royalty rate of 25,000 tons per year which will give a 40-year life. There is no indication that actual mining operations will be initiated in the near future and the lease has an unexpired term of 50 years, so there is no reason to expect that the royalties will be paid at a greater rate than that specified in the minimum royalty clause of the lease. The total royalty to be expected is

1,000,000 tons at 25 cents per ton, or $250,000, which will be paid in equal annual installments over a life of 40 years. There is nothing speculative about the amount of the royalty or the rate at which it will be received, so that the risk of realization is a minimum. The minimum interest rate recognized by the Income Tax Unit for the valuation of a lessor equity is 6 percent, which is used in the case of discounting total expected royalties, over a period of 40 years, to a present worth as of March 1, 1913. Discounting at this rate gives a March 1 value of $88,600. This amount divided by 1,000,000 tons gives a depletion unit of 8.86 cents per ton. The yearly income from 25,000 tons at 25 cents is $6,250, depletion at the above rate is $2,215, and the income is the difference between the two, or $4,035, on which the tax is paid.

A Complex Valuation

"The second illustration is a complex valuation as at March 1, 1913, in the case of a large gold dredging operation. In such a case there may be fifteen or twenty dredges, some capable of handling 10,000 cubic yards per day and others having smaller capacities, each dredge having a different operating cost dependent upon the nature of the ground in which it is working, and each dredge recovering a different amount of gold per cubic yard mined. The period during which each dredge will operate must be determined. Some dredges will have to be dismantled and moved to other portions of the property at various times, and they will cease operations one by one as the gold-bearing gravels become exhausted. This problem is attacked by determining as accurately as possible the expected operating profit from each dredge for each year of its operation, and, from this, the total expected profit per year for the entire operation. From this amount is deducted the expected yearly costs of dismantling and removal of dredges and expected capital additions by years leaving variable but decreasing amounts of expected yearly income.

"In the case of the iron ore lessor the valuation was that of an income of equal yearly amounts and only one discount factor was needed. When a valuation of a variable annual income is necessary, each year's income must be reduced to present worth by a separate discount factor. If there are twenty years of income there are twenty factors. As there are numerous uncertain factors involved in an appraisal of this character, the risk of realization of the profits is greater than in the first case given, and an investor would expect a greater rate of interest upon the purchase price, say 10 percent. The higher rate of interest may be considered as insurance against loss of either principal or interest from the investment. If a number of investments are made, some will return high profits and in others there will be losses, but the average profit from all investments will approximate the 6 percent return from the safer class of mining investment.

"The March 1, 1913, value of each year's income having been determined by discounting at 10 percent, the sum of these amounts gives the March 1, 1913, value of the total expected income from the mining operation. The March 1, 1913, value of the expected income is composed of two elements, values for depreciation and depletion. Both the purchase price of the natural resource and the cost of the equipment needed for its exploitation are included in this value. As the cost of future capital additions has already been deducted from the expected yearly profits before they were discounted to values as at March 1, 1913, it only remains to deduct the March 1, 1913, value of the depreciable assets from the value of the income already determined. The remainder is the value for depletion. The unit rate for depletion is determined by dividing the value for depletion by the total number of ounces of recoverable gold in the mine. The yearly tax free deduction for depletion is determined by multiplying the rate of depletion per ounce by the number of ounces of gold removed from the mine and sold during the year.

"Valuations of oil and gas properties are made in a similar manner. Valuations of mines are more frequently made on the assumption of equal annual income for the entire life of the mine or by a series of valuations of equal annual income for different periods of the life of the mine. The computation of value for depletion and the depletion rate per ton in the two examples given is based upon one recoverable product from the ore. In cases where there are several products from the same ore, such as gold, silver, copper, lead, and zinc, the computations of values and rates for depletion are still more complicated and difficult.

"It may be taken for granted that there is no formula which can be used indiscriminately, but that in the last analysis many valuations are questions of judgment which must be left to men who are familiar with the industry and the field. Such men are attached to the Natural Resources Division, grouped into industries."

CHANGE IN TAX MACHINERY

ADMINISTRATIVE changes in the income tax unit of the Bureau of Internal Revenue, which will benefit the mining industry as well as other industries, were announced recently by Commissioner Blair. Assistant Deputy Commissioner E. W. Chatterton has been appointed production manager of the unit to expedite the audit, review, and settlement of pending claims and assessments. The Review Division has been abolished and thus much of the red tape procedure is eliminated in the settlement of cases adjusted in the Natural Resources Division.

The latter division has established its own review section which has been placed under Mr. W. E. Hix, and this will facilitate final action. Under former procedure, the Natural Resources Division would give the taxpayer a hearing at which a basis of settlement would be agreed upon. The taxpayer's liability would then be computed on this basis, and the case would be sent to the Review Division for approval. This division frequently would undertake to upset the valuations and other computations made by the Natural Resources engineers and auditors, and the case would be sent back for redetermination, whereupon the taxpayer would be required to come to Washington for another hearing and final settlement would be postponed for months.

PETROLEUM SPECIFICATIONS MEETING

THE INTERDEPARTMENTAL Petroleum Specifications Committee, which prepares tentative specifications for all petroleum products, including gasoline, kerosene, fuel and lubricating oils, for the United States Government, will hold an open meeting on July 3 at 9:00 a. m. in the auditorium of the Interior Building in Washington, D. C. At this meeting the Specifications for Petroleum Products, which have been published as Technical Paper 305 of the Bureau of Mines, and the Testing Methods for Petroleum Products, which have just appeared as Technical Paper 298, will be discussed in detail. It is hoped by the committee that all persons interested will feel free to be present and express their views on the subject.

GOVERNMENT TO COLLECT WAR MINERALS DATA AS PREPAREDNESS MEASURE

THE GOVERNMENT has established an organization designed to formulate preparedness measures in connection with war minerals and any possible future emergency similar to that which arose when the demand for these minerals suddenly was increased many fold by the entry of the United States into the World War.

Through the newly established Division of War Minerals Supply, placed in operation May 1, a wealth of data will be gathered concerning operations engaged in the mining of tungsten, manganese, chrome, and mercury. This material will deal with the following details concerning each enterprise producing these minerals: present production; cost of production; amount of mineral in known deposits; possibility of speedily increasing production through extension of operations; maximum of increased production, and cost of operation under peak demand conditions.

After this supply of information is collected, the newly created machinery will be engaged constantly in keeping the data up to date as a means of preparedness against any posible contingency.

Constant Revision of Data

The new organization, which is a division of the Bureau of Mines, and under the direction of H. S. Mulliken, who has acted as special assistant to Director Bain of the bureau, is charged with the maintenance of a proper balance of trade among the mineral industries of the nation, as well as handling matters relating to the supply of strategic minerals involved in war plans of the government. Other related duties will be added to its work from time to time.

The work will be carried on by a liaison committee appointed by the American Institute of Mining and Metallurgical Engineers at the request of the General Staff of the War Department. Director Smith, of the Geological Survey; President Dwight, of the Institute; Pope Yateman, and Mr. Mulliken are members of this committee. Additions to the personnel of the committee probably will be made at a later date. Supplementing the committee's activities will be those based upon the war minerals investigations carried on by the Bureau of Mines during the war.

Preliminary organization work has taken up the three weeks which have elapsed since the creation of the division. Soon, however, a functioning machinery will be spread across the country for the purpose of gathering the detailed data on the five major war minerals, with others probably to be added as the work progresses.

To Form Sub-Committees

Sub-committees will be appointed, each of which will be assigned to the study of some specific mineral or individual mining district. The information which will thus be acquired will be forwarded to the central committee, which will at all times be in close cooperation with the Geological Survey and the War Department. Mr. Mulliken is to be chairman of the central committee.

Plans have been completed whereby the division will concern itself directly with the prices of the non-ferrous metals. Through this phase of the work, the technical press will publish weekly quotations of the prices of these metals which will bear the sanction of the government and will hold the same position in the mining industry that similar quotations handled by the Department of Agriculture bear to the farming industry. It is believed that this service will be of special benefit to those who produce and engage in the marketing of these metals on other than the most extensive scales, since it will furnish a basis upon which contracts can be drawn with a knowledge of stability.

HELIUM CONSERVATION MEASURE IS PRESENTED TO CONGRESS

DIRECT EFFORTS are being made through legislative channels to assure conservation of helium gas as a measure of national defense and future industrial utility. These efforts are crystallized in a bill, now pending before Congress, which has the indorsement of the President and the Secretaries of War, the Navy, and the Interior, and the approval of the Director of the Budget. With this volume of support the measure is practically assured of success.

From present information, it is estimated that 500,000,000 cubic feet of helium gas are dissipated annually, this loss occurring in the commercial consumption of natural gases which not yet have been denuded of the helium content. Experts concede the immense value of our helium gas reserves, and the strategic and commercial advantages they possess for the nation. These advantages rest not only in its use as an element in possible future wars in replacing the hydrogens now used as lifting power for Army and Navy dirigibles, but commercially in the passenger and freight dirigibles in use. Research will inevitably lead to new and important development in connection with the uses of helium.

Helium gas is a natural resource available to the United States alone and authoritative opinion emphasizes the necessity for its conservation, since it is a certainty that any other country possessing such a monopoly would jealously conserve it.

The bill recently introduced in Congress bears these ideas in mind and seeks the achievement of corresponding results, calling for an appropriation to prevent, so far as possible, the present waste of helium, to obtain control of such undeveloped fields as now are known to contain helium, thus achieving a successful underground natural storage of the gas until such time as national necessities require its extraction. By that time, government studies and research will have resulted in such added information that will improve design of extraction and reduce production cost to an everyday figure. The bill also provides for operation of existing government plants for production of helium to fill present demands of the Army and the Navy, and precautionary measures regulating exportation of helium also are proposed.

PRODUCTION OF STONE IN 1921

ABOUT 62,400,000 short tons of stone was quarried in the United States in 1921, according to the Geological Survey. This is more than 20 percent less than the production in 1920. The estimated value of this stone is $92,500,000, a decrease of 30 percent as compared with 1920. The figures given were obtained by comparing the reports of certain representative companies for 1920 and 1921. The reports compared for building, monumental, paving, curbing, flux, and crushed stone represent more than 35 percent of the total for each product.

DEVELOPMENT OF ALASKA'S COAL IS RESOLVING INTO A REAL INDUSTRIAL PROBLEM

DEFINITE ANSWERS for two major questions involving the Alaskan coal fields soon will be furnished when a decision is made by the Lake and Export Coal Company regarding its proposed commercial development of the deposits, and when final results of the naval consumption tests place the Chickaloon River and Bering River coals on a definite basis as regards quality.

Upon events which immediately follow completion by the Lake and Export company of its examinations of the deposits will hinge many of the future chances of development of the Alaskan fields. The situation reaches a climax because of the peculiar conditions under which the industrial organization sent its engineers to investigate the deposits.

View of the Chickaloon coal field in Alaska, showing mining operations carried on by the Navy Department before supervision of the fields was transferred to the Department of the Interior

Primarily, officials of the Interior Department who are charged with the task of developing some means whereby the coal operations in the territory may be made commercially feasible, are aware of the fact that none but an industrial organization of considerable magnitude and financial power can hope to achieve the results which are being sought. These officials have laid stress upon the futility of any plans which fail to take this fact into consideration, for it is a certainty that "shoe-string" operators do not possess the ability to carry on the operations on the scale which will be necessary if the fields are to be successfully developed.

Realizing these conditions, officials of the department have bent every effort toward interesting a company of major calibre in the proposition. Ten of the larger companies were canvassed, but only four were sufficiently interested in the matter to give the matter more than cursory attention. Of the four who did go into greater detail in their considerations, only one—the Lake and Export Coal Company—felt justified in sending its engineers to the field. These facts are being cited by officials as indicating the business sagacity that must be used in connection with the Alaskan fields if their development is to be made profitable.

The underlying situation is that difficulties of mining, quality of coal, lack of established market and other similar factors have caused all save one large company and several "shoe-string" enterprises to shy away from the proposition.

In this connection, it is being pointed out that the general conception of the coal resources of the territory are greatly exaggerated. Reports circulated broadly by many considered as authorities during several years have caused popular belief to picture almost limitless abundances of coal in Alaska, easy to mine, practical to market, and of superior quality.

That these coal deposits are not the bonanzas which many think them to be is an open secret, upon which additional light has been thrown since the transfer of the supervision of the Alaska coal fields from the Navy Department to the Department of the Interior. This condition has been more or less common knowledge during the past year or two, but it has remained for an actual effort to link private enterprise with the development to bring to the fore the more accurate reports of the practicality of mining and the quality of the Alaskan deposits.

One close student of the situation, who has come in contact with official views, states that "there are many coal deposits in the eastern part of the United States that are far superior to those of Alaska and which never have been even distantly considered as being suitable for development at the present time." This same authority declares that if the Alaskan deposits were located in the United States no attention would be paid to them. There is, however, necessity for taking into consideration the value of these reserves as sources of coal supplies for the Navy during periods of emergency when it would be impractical to bring coal from the Atlantic Coast to western ports if it were possible to fill the naval bunkers with coal produced by mines closer at hand.

This factor, emphasized by the fact that the navy spent over one million dollars in development work in the fields before they were turned over to the Department of the Interior, is being given a place of prominence in discussions being carried on by government officials. It is being pointed out that this preparedness measure, if all other elements in the situation were to be discarded, would cause the administration to place every possible enhancement in the pathway of those industrial organizations which evidence a desire to enter into the operations.

It is evident that conditions prevail which are much different than those which usually are found when the government turns over some of its resources to private industry for development. Many individual companies usually seek to secure leases, options or other rights of similar nature over lands held by the government. The Alaskan coal situation is unique in that the operators who take over the development will face a greater proportion of risk than ordinarily is found in private business, with the result that eagerness is absent and the transaction is reduced to the coldest kind of business activity in efforts to gain a margin of profit in spite of natural conditions.

The following portion of a recent statement by the Department of the Interior indicates the narrowness of this margin as viewed by representative coal companies at the time that the development offer was extended to them:

"The detailed plans were discussed with a number of companies, and were definitely considered by four firms. Of these, the Lake and Export Corporation, of Huntington, W. Va., was the only one considering the prospects sufficiently good to warrant the expense of a preliminary field and engineering examination. Accordingly, the Department of the Interior has agreed with the Lake and Export Corporation to give that company until July 15 to complete an examination of the mines and possible markets and to make an offer to the Secretary for the leasing and operation of the mines and marketing of the coal."

In the event that the Lake and Export company should find as a result of its field work that it could not operate the properties profitably, the government would face the practical necessity of making an especially enhansive offer in order to assure naval coal supplies on the Pacific. Either this would be done, should the company's engineers return an unfavorable report, or the development would have to go on as best it could in the hands of the "shoe-string" operators, whose best efforts, say officials, would be productive in only a small degree because of the absence of an operating machine of sufficient magnitude to cope with the difficulties presented.

OIL STOCKS HELP TO OFFSET CUT IN COAL PRODUCTION

STOCKS of gas and fuel oils have been playing a large part in offsetting a decrease in coal production caused by the strike, according to the interpretation placed by officials upon statistics just released by the Bureau of Mines showing that comparison of the first quarter of this year with the corresponding period in 1921 indicates an increased domestic consumption of 458,235,000 gallons and an increased production of 140,741,000 gallons.

Stocks of gas and fuel oils are reported as totaling 1,250,278 gallons, a decrease of 71,000,000 gallons as compared with the February reserve. Exports and shipments were 68,544,000 gallons less during the first quarter of this year than those of the similar period in 1921.

The nation's gasoline stock is still increasing and had on April 1 passed, by some 47,000,000 gallons, the high record mark of 807,000,000 gallons reported in storage March 1. Stocks of 854,232,000 gallons were on hand April 1, a supply 20 percent greater than for April 1, 1921, and 36 percent greater than for April 1, 1920.

The number of operative refineries in the United States increased from 296 to 306 during the month of March. The daily average amount of oil run through the stills was 1,390,000 barrels, an increase of 22,000 barrels in the daily average over the preceding month. The refineries in operation show a 79 percent operative status based on their daily indicated capacities, this being an increase of 3 percent over the month of February.

Kerosene stocks decreased 10,000,000 gallons during March. Present stocks are 125,000,000 gallons less than a year ago; production for the first quarter was less, and exports, shipments to insular possessions, and domestic consumption were greater.

VALUABLE COAL STORAGE DATA WILL BE COMPILED WITHIN THREE MONTHS

A NEW and thoroughly comprehensive chapter will be added to the history of coal storage investigations when a report is made three months hence upon the results of studies now being conducted by the Bureau of Mines and the Bureau of Foreign and Domestic Commerce under the immediate supervision of F. R. Wadleigh, head of the coal section of the latter organization.

Material for the report will be drawn largely from answers received from over two hundred of the most important industrial coal consumers of the country in reply to a questionnaire circulated among them. Data contained in these replies now is being tabulated. When this work is completed, the results will be interpreted by experts of the two bureaus. Those closely familiar with the involved conditions of the coal industry are freely predicting that the contents of this report probably will prove of exceptional value to the industry by presenting material which will aid materially in self-stabilization through a greater and more intelligent employment of the storage of coal as a means of inducing a more even production of coal throughout the entire year.

It already is evident that solutions will be supplied for technical and economic problems which long have been connected with the storage of coal, centered mainly under the classifications of oxidization, cost of storage, length of time that storage is feasible, location of storage plants, and the most efficient methods to be pursued in the extra handling of coal which is involved.

In undertaking this work the government experts have at their disposal a wealth of material furnished by investigations conducted by foreign governments. Studies of this type first were undertaken by the German government in 1865, with the French and British following closely within the same decade.

Three factors are being given close consideration in efforts to determine the best method of storage. It is expected that the final deductions will go far to show whether it is more economical and practical to store coal under water or above, and whether better results are to be obtained by storage in closed sheds or in the open, with due consideration being given at all times to local conditions. The question of the type of floor or ground that best lends itself to efficient storage also is being studied in detail.

In addition to these larger problems, the report also will cover the following:

Location of storage with reference to point where coal is used; quantity stored (maximum and average); methods of preventing spontaneous combustion; methods of handling fires; devices used for observing temperature and inspection; danger point as regards temperature; degradation in size in stored coal; deterioration in heating value; tonnage that can be stored per acre of available space; maximum depth of pile allowed; best time of year to store; cost of plant; cost of maintenance; cost of handling in and out of storage; effect of climate on stored coal, if any; costs of unloading and releasing, costs of investment and fixed charges.

Woofing and Warping

VII. Senator Arthur Capper

A Series of Scrutinies Directed Toward Notable Legislative Personalities

By IRA L. SMITH

Arthur Capper

ARTHUR CAPPER, the man who has led the rural hosts into the land of milk and honey, is as unusual as a one-winged bat flying backwards. All because old Dame Nature sat back in her easy chair some fifty-odd years ago and decided to do something different. She put away her knitting and went out in the kitchen to do some puttering around with a few choice odds and ends of traits of character that were on the pantry shelf. She mixed them all together; the result is among us in the mind that's been devising plans these many years to put the farmers all to the merry.

Time was when the countryside was a quiet place where cows laid down in the shadow of trees beside drowsy brooks, and where a field of golden grain was content to nod its head with the complacency of a man who has been married for fifty years. But things are different now, since Capper began knocking them for a row of tail-spins out in the rhubarb belt. The lowing herd, instead of winding slowly o'er the lea, as in days of yore, gallops briskly back and forth, proclaiming in bovine accents the praises of the man who made the country something more than a place to run roads through. As for the golden fields, they bob their heads excitedly as they discuss the deeds of a quiet fellow who found time enough left over from the job of running a whole flock of newspapers to play first fiddle when it came to putting more pro-farmer bills through Congress than there are left-handed thinkers in Russia.

It's well worth while to take a few spare thoughts by the napes of their necks and set them to work analyzing the make-up of this paradox who has done such notable things since he first came to bask in the shadow of the Capitol's dome. Success mainly became attracted to him because of his ability to look up at a clear sky and see just exactly what the farmers want. Having figured out what desires are nestling beneath the broad-brimmed straw hats that bob along behind plow horses, he quietly proceeds to use seventeen distinct varieties of speed in satisfying the boys out in the tall grass.

He is more retiring than the squire's daughter at her first barn dance. As far as extemporaneous speaking is concerned, he takes life easy. This probably is because he has poked away at the keys of an Underwood so long during his career as a newspaper man that he has become better acquainted with the sight of words than with their sound. All this means that he is a rarer sight on the floor than hips on an eel.

Physically he is frail, weighing several points south of what an average man can show in a tussle on the Fairbanks. But he is as wiry as Old Man Wiry hisself, and as active as a fire department on the Fourth of July. His hobbies are bananas in the top right-hand drawer of his desk, and golf early in the morning.

Staggering into the last paragraph, it might be said that there is no end to his accomplishments for the rustic brethren. Should years to come find each quarter acre of farming land in this broad country of ours bedecked with a statue erected to the memory of his achievements, those who spend their lives scratching the face of Mother Earth will only have made a feeble gesture toward giving proper credit to the man who made the hay-seed famous.

FEDERAL OFFICIALS SEEK INCREASED EFFICIENCY FOR GOVERNMENT COAL PURCHASING SYSTEM

THE GOVERNMENT is giving serious consideration to its coal purchasing methods, two reports on the subject having been submitted recently to the Federal Purchasing Board of the Bureau of the Budget by members of that organization's sub-committee on coordination of government purchases of coal.

While no final action has been taken, the board apparently is inclined to feel that some new plan for coordination should be adopted if the purchase of coal is to be brought under the general character of policies employed by the Bureau of the Budget to secure the greatest possible return for money spent in purchases for the government. The coal purchasing system used by the Pennsylvania Railroad has been brought to the attention of the board, it is understood, and may furnish a model for a similar plan to be applied to federal activities. This system's main feature is found in a central coordinating agency which supervises all purchases of coal, though it only makes recommendations to the various agencies that actually make the purchases, rather than dictating the exact conditions under which the coal is to be bought.

Recommendation For Central Body

Establishment of a central federal coal purchasing committee is recommended in one of the reports submitted to the Federal Purchase Board. This committee would have a membership consisting of representatives of the following government branches: Navy Department, War Department, U. S. Shipping Board, Panama Canal, and the Bureau of Mines. It is recommended in this report that the committee's duties be as follows:

1. To formulate and put into effect policies and methods that should be followed in the purchase of coal for all government requirements.

2. To coordinate the work of government coal purchasing agencies in preparing specifications and sending out requests for bids, and in making and awarding contracts for their coal supplies, whether for short term or long term periods.

3. To keep informed regarding all government coal requirements, the use of different kinds and grades of coal, plant equipment, coal handling facilities, storage facilities and transportation, sampling, analyses and tests, as well as all other matters affecting the government coal purchases.

4. To keep informed and closely in touch with market prices of coal, general conditions in the industry; transportation facilities and conditions, labor conditions, new coal mining developments and new developments in the use of fuels, new fuels and methods of sampling and analysis; such information to be supplied to the different government coal purchasing coal agencies.

5. To represent the government in all dealings with the coal industry involving the policies and methods of the government in making coal purchases to meet its requirements.

Disapproval of the idea of centralized purchase is expressed by the other report in the following language:

"We do not recommend centralized purchase in one office or department for all government departments. This plan is believed to be uneconomical and unworkable. The requirements of the various government departments are so different that no one office could satisfactorily buy for all departments. There are the same reasons for having a purchasing office in each department as there are for having separate government departments themselves. It is believed that one department could no more buy coal to advantage for all government departments than could one department transact all the other business of each government department—that is, doing away with all government departments and having only one.

"Furthermore, each government department is held responsible for the expenditure of its own appropriation. And since each department is responsible, each must be given authority to expend its appropriation in the manner considered most advisable. Centralized purchase would take away this authority.

"Each department would have to maintain practically the same coal purchasing organizations as at present, as the control of requirements and actual handling of the coal at the various points of consumption would necessarily have to be under the department of which those activities are a part. The volume of purchase would be so great as to be unwieldly and would be beyond the capacity of smaller contractors. There would be unavoidable friction between the various departments and the central purchase office. The plan of centralized purchase of coal for all government departments and establishments is considered inadvisable, and it is not recommended."

The two reports, differing in essentials only in regard to the question of centralized supervision of purchases, cover a wide range of subjects connected with the purchase of coal by the government, many recommendations being made which are calculated to enable the government to secure its coal at a lower price and in a more efficient manner than has been the case heretofore.

Other Interesting Features

Some of the most interesting of the recommendations are those which aim to secure better prices and economies in purchase by exciting greater competition among those seeking to secure government fuel contracts.

"Today the government is not getting the widest possible competition for supplying its coal requirements, nor has it done so in the past, for various reasons.

"Unreasonable and inequitable regulations and specifications, delay in payment for coal furnished, lack of knowledge of coals and their uses, of prices and market conditions, have all restricted competition; many reputable and large coal companies have declined to bid on government contracts for these and other reasons."

The following recommendations have been made in an effort to eliminate these conditions:

1. Greater publicity in requesting bids.

2. Greater centralization of purchases, as recommended by the committee.

3. The adoption and use of standard forms for proposals, bids, specifications and contracts—that will be simple, equitable, practical, and of such a nature that every reputable coal company would be willing to offer suitable coal.

4. Having the coal purchasing agencies of the government keep in closer touch with the industry, through the Central Coal Purchasing Committee, thus securing its assistance, cooperation and advice.

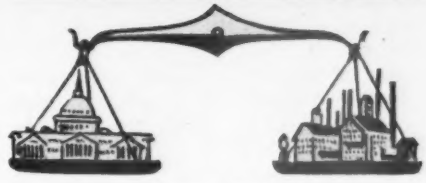
5. Having all proposals for annual contracts made public at the same date, as nearly as is possible.

PLAN INAUGURATED FOR TRADE ASSOCIATIONS TO COOPERATE WITH GOVERNMENT

RELATIONS now are being established between the Department of Commerce and trade associations for the distribution of trade statistics. They are thoroughly voluntary, and are being made under a plan which places the department as the distributor of the statistics to all who are interested, including the trade press, jobbers, and ultimate consumers, as well as the members of the associations themselves. This plan is in keeping with the outline drawn at the recent meeting of representatives of the associations with officials of the department.

David L. Wing, who for many years was a member of the staff of the Federal Trade Commission, has been appointed by Secretary Hoover to represent the department in establishing relations with such of the associations as desire to enter into the cooperative agreement.

Due to the present situation centering in the coal strike, the various coal trade associations have had little opportunity to take up the matter of their relationship with the department. For that matter, the entire subject is so intricate and involves so many elements of policy that few of the several hundred associations in the country have communicated with the department in the short time that had passed since Mr. Wing instituted the active liaison activities.



DAVID L. WING

Although the Department of Commerce will make no move toward interpreting the law or telling the associations what they can or cannot do, it will seek to create confidence in those quarters where officials of associations have been inclined to discontinue their collection of valuable trade statistics on the ground that they were not certain of their position, preferring to have nothing to do with the entire matter rather than take a chance of becoming the subjects of legal prosecution.

Under the plan which is being built up, representatives of the Department of Commerce throughout the country will receive from the associations in their districts such statistical matter as is to be distributed, placing the copies of this matter in the mails immediately to be distributed to a mailing list covering all who are interested in the figures. This system will facilitate speedy handling of the statistics by eliminating the necessity of forwarding them to Washington. Copies of all these statistical compilations will, of course, be sent to the Washington offices of the department, where material gathered from them will be used in the industrial statistical work carried on by the government.

While officials of the department do not deny that it will be possible for individuals to make illegal use of figures that are gathered and distributed in a thoroughly legal fashion and with honest intent, reliance will be placed largely upon complaints from those who are affected as a means of eliminating any illegal activities that may appear.

A distinct effort toward progress was made by Secretary Hoover when he addressed a meeting of the National Manufacturers' Association, New York, May 10, presenting a plan under which the trade associations would be registered with some government agency, an outline of their activities being on file with federal authorities.

Under this plan, after federal approval has been given the associations' activities, they would proceed with their operations. Complaint brought against any of these operations would result, however, in hearings being held by federal authorities in the case. If it were proved that the acts complained against were unlawful, these particular functions would be suspended. If the associations insisted on continuing them, they would be subject to prosecution. The same procedure would govern cases where it was complained that the associations had extended their activities beyond those listed in their original proposals.

In discussing the situation and presenting the plan, Secretary Hoover said, in part, as follows:

"We have had much discussion upon trade associations. I do not propose to enter here upon the great value of the vast majority of them for advancement in our whole economic machine, nor to discuss the evils of that minority which receives so large majority of attention in the public press. The large discussion of trade associations does not vibrate around those which are constructive, which contribute to higher business ethics, which daily advance the efficiency of our processes of production and distribution. It revolves around that minority which are, or are thought to be, guilty of restraint of competition and therefore a violation in spirit or in law of the restraint of trade acts.

"But your purpose and mine is upon the dull side of advancing constructive ideas; of endeavor to build up the progress and prosperity of our people. The minority are the concern of the officers of the law. I am interested in this minority only so far as the handling of them has created a great uncertainty of what is or what is not a restraint of trade. This uncertainty now threatens to destroy many useful services because most men will not do a good act if they fear it may be interpreted as being wrong. I believe the time has come when we must have some assistance from the law, but this does not imply the alteration of the purpose of the restraint of trade acts.

"At the time the Sherman Act was passed the country was in the throes of growing consolidations of capital. These were consolidations of actual ownership, and the country was alive with complaint of attempts to crush competitors with unfair practices and destructive com-

petition. Large numbers of trade associations were then in existence, but were scarcely even discussed in this connection. Since that time the trade associations have grown in number, and some minority have thrown a reflection upon the good purposes of the majority.

Perform Beneficial Functions

"The legitimate and advantageous trade associations perform some thirty-odd different functions in the interest of their members and the community at large. A minority undertake activities that have been called into question. The legitimate trade associations possess four important differences from capital consolidations.

First. Their objectives are simply to lessen production and distribution costs or losses, to increase consumption of their special commodities, to facilitate even and steady supply, to protect their rights in relation to other economic groups.

Second. The above purposes are open to the common interest of a whole trade, not a fraction of it.

Third. The purposes of these associations do not include control of price or profits, production or distribution.

Fourth. These associations may be dissolved instantly without any disturbance of capital or production.

"It is my belief that if they are to grow in beneficent directions they should have some definition in law that will remove the uncertainties of their situation.

Deviates From Other Plans

"The proposal that I should like to put forward for your consideration is a deviation from the proposals recently urged by Senator Edge. I lay no claim to originality in this matter. Without entering upon legal formulation, the suggestion is that there should be enacted a minor extension to the Clayton Act to the effect that interstate trade associations should be permitted to file with some appropriate governmental agency the plan of their operations and the functions they propose to carry on. That upon approval of such of these functions as do not apparently contravene the restraint of trade acts, they may proceed with their operations. If, upon complaint, however, either of individuals or the low officers of the government, that these functions do restrain trade, then after a hearing and proof the right to continue these particular functions shall be suspended, and if continued they shall be subject to prosecution. Also, if it shall be proved that they have extended their activities beyond the functions in their original proposals they shall be subject to prosecution from restraint of trade violations. Associations which do not wish to secure this limited interpretation of the law with its assistance to confidence should not be required to do so; they, however, necessarily assume themselves the job of interpreting the law with the risks such interpretation entails. These ideas would be inapplicable to consolidations of capital, and I would not propose that they should. All who know the situation in these associations will realize that in the main their membership comprises smaller businesses. Such measures will serve to protect small business, for big business takes care of itself.

"I need not refer here to the beneficent results that have been attained to the community by the legitimate associations in the safeguarding of quality of goods, in reduction of waste in manufacture and distribution, in promotion of foreign trade, and a score of directions that make for the upbuilding of our commerce and industry. These are the sort of things that we must preserve in American life."

SUCCESS OF IRON ORE EXPERIMENTS WILL BE BOON TO WEST

ECONOMIC BENEFITS of immense value to the mining industry in Pacific coast states are promised by investigations of sponge iron production and carburization now being carried on by the Bureau of Mines. Successful results from these studies are expected to greatly reduce costs of copper sulphide precipitation, as well as to open up iron ore deposits and provide cheaper iron and steel for the western states.

Engineers in charge of the investigations, which are being conducted at the Northwestern station of the bureau, at Seattle, Washington, under the immediate direction of Clyde E. Williams, superintendent of the station, expect to be able to draw definite deductions from their studies within four months.

Subject of Increasing Attention

Since the Anaconda company began the leaching of tailings by iron in 1914, the precipitation of copper from sulphide solutions by this means has been receiving increased attention on the part of the large copper producers. It was estimated by engineers of the Anaconda company shortly before the war that scrap iron could be used for this purpose until its cost rose above $10 per ton. It is when scrap reaches a price corresponding to this figure that it becomes necessary to secure cheaper iron, mainly through reliance upon the use of sponge iron.

Under existing costs of electric power, it is economically impossible to produce sponge iron by the Swedish method which depends entirely upon the electrical furnace. The bureau's experts have been producing sponge iron more economically by low temperature reduction of the iron oxide, with subsequent introduction into the electric furnace for melting and carburization to produce pig iron.

When the studies have advanced sufficiently to disclose a regulation of variables, such as temperature, time, oxidation, and carburization, which will permit of determination of the cheapest method of operation, it is believed that the greater part of the task will have been completed, since the potential supply of electrical energy on the Pacific coast is more than sufficient to insure feasible commercial production of sponge iron, once the most efficient process is discovered. Deposits running along the coast from Lower California to Vancouver Island are the sources from which iron oxide for sponge iron production may be obtained.

Summary of Results

Results of the bureau's investigations in connection with carburization in the manufacture of synthetic cast iron are incorporated in a paper recently prepared by Clyde E. Williams and C. E. Sims, metallurgist and electrometallurgist, respectively, of the Northwest experiment station. This paper was presented by Mr. Williams before the general meeting of the American Electrochemical Society at Baltimore, April 28, where it was declared by authorities to be a "distinct and valuable contribution to scientific knowledge."

"This study of carburization in the manufacture of synthetic cast iron was carried on because of the lack of definite information concerning the factors which influence carburization," Mr. Williams declared in his presentation of the subject.

"Instead of the sponge iron, steel scrap in the form of turnings, punchings, and clippings was used, because it eliminated a number of variables introduced by the impurities in the sponge iron. The results of this investigation consequently have direct bearing upon the present practice of making synthetic cast iron from steel scrap."

EXAGGERATION INSPIRES COAL REGULATION PROPOSALS, N. C. A. MEETING IS TOLD

STRIKING STATEMENTS concerning the coal mine labor question, involving the charge that irregularity of the coal industry's operations has been greatly exaggerated in the public mind by officials of the United Mine Workers of America, formed predominating features of developments at the Fifth Annual Convention of the National Coal Association, Chicago, Ill., May 24 and 25.

This exaggerated opinion of the industry's seasonable character forms the excuse for proposed Federal legislation calling for regulation of coal mining to a greater or lesser degree, speakers told the convention. Since many other basic industries are more seasonable in their operations than the coal industry, it was declared repeatedly that any legislation which has intermittent employment as its alleged reason for existence should not be confined to apply to one industry alone, but should cover the entire field.

Statistics were quoted by President Bradley, showing that for the period from April to September, the production of coal was 49 per cent from 1913 to 1921, and that for the period from October until March, over the same stretch of years, the production was 51 per cent.

"Much of the plan to regulate and control the coal industry is built up around this theory that it is a seasonal occupation and that our men cannot make a living wage," said Mr. Bradley in his address before the convention.

"In connection with this is the question of industrial irregularity," he continued. "That is, the irregular operation of mines because of a lack of market brought about by a depreciation in the demand. This has been confused with the first; the two have been put together; the question of car shortage has been dragged in by the heels, and the composite picture is one of an industry that only runs a small fraction of the time that other industries operate.

"I think it is the experience of all of us who are interested in other industries as well as the coal industry that during the depression through which we have just come, and during similar depressions, those businesses have had less to do than the coal industry. It is impossible that the working time of the coal industry should be greater than the aggregate working time of all industry, but many of the coal-consuming industries have only run 25 per cent of the possible time in the year 1921, whereas we ran four-fifths of our possible time."

Not only has the public been brought to look upon the irregularity of coal operations as much greater than it actually is, but there is much misunderstanding within the industry itself concerning this particular question, the convention was told.

A. M. OGLE
Newly-elected president of the National Coal Association

The same general trend of thought also was carried in the report of the chairman of the association's committee on government relations, which included the following paragraph:

"Investigation will show that the coal industry is no more irregular than most of our important industries. Stabilization of the coal industry is not required to cure that particular evil, and special legislation directed to our industry in an attempt to correct irregularity of employment should be directed toward all industry if that question is to come up before Congress and receive legislative action."

A. M. Ogle, newly-elected president of the association, succeeding Mr. Bradley, also stressed the fact that legislation contemplating regulation of industry because of intermittency of employment should be directed to deal with all industries in which operations are irregular, rather than to deal with any single industry alone.

Outlining his views of what the labor policies of the National Coal Association should be, Mr. Ogle, addressing the convention following his election, declared that while he does not believe that the association should undertake to function in making wage contracts, he feels that the organization should agree upon certain principles which will furnish guidance in the search for solutions of the industry's problems. He suggested two such principles, in the following language:

"That we recognize the fundamental and inherent right of every individual engaged in this industry to determine for himself or itself the policy in dealing with this labor question; and that there should be no quarrel with that district after it has made its decision; and that there should be nothing done by other districts to interfere in any way with that district in carrying out its policy after it had been determined.

"That in those districts where the principle of collective bargaining may be continued, we should support and assist in every way possible where the request is made from that district, for the establishment of equal and full responsibility and recognition of obligation on both sides and of both parties to the contract."

Discussion of ways and means to throttle speculation in coal during the present emergency occupied much of the convention's attention, a resolution being passed demanding that each purchaser of coal from members of the association give such billing of the coal as will guarantee the movement of coal so sold to an actual coal consumer or to a dealer for retail distribution. This action is in direct keeping with a part of the plan which Secretary of Commerce Hoover recently presented.

GRADUALLY BUT surely the use of time saving and cost reducing machinery is being extended into all the different phases of mine operations. In the face of great obstacles, the inventive genius of American manufacturers and mine operations has been able to work out effective equipment even for some of the most difficult operations in mining enterprises.

A splendid illustration of the development of such machinery in the face of serious difficulties has been the steady improvement made in the production of effective underground loading machines.

The loading of ore in coal mines or in mine tunnels or mine rooms has always been an important item in mine cost. The use of hand labor is expensive and the work is relatively slow. Continuity of movement has been difficult to obtain and the different conditions in each mining operation have made it especially difficult to develop machinery which would satisfactorily operate under varying conditions.

The real problem in the development of shoveling machines has been to produce a machine which can operate effectively in that class of mining work to which the ordinary steam shovel is not applicable owing to limits in height and widths of working places and to secure a continuity of movement which could not otherwise be obtained.

The development of this class of machines has been only of recent date and they are being perfected to meet different mine conditions. Among such machines, the Myers-Whaley shoveling machine is the pioneer.

The interesting developments which have taken place in the production and perfection of shoveling machines for underground loading are one of the important facts in connection with recent mining development. They furnish sufficient evidence to justify the belief that one of the most valuable and interesting improvements which will take place during the next few years will be the development of a shoveling machine underground which can operate under any and all conditions and will create larger production at a lower cost.

USE OF AUTOMATIC SHOVELING MACHINES DECREASES DEVELOPMENT COSTS

By WILLIAM WHALEY
Vice-President, Myers-Whaley Company

In 1907, the automatic shovel motion was conceived and patented by William Whaley of the Myers-Whaley Company, Knoxville, Tennessee. The first machine was built in 1908 and was operated in the mine of the Wind Rock Coal and Coke Company. This machine weighed only 4,500 pounds. It loaded coal at a maximum observed rate of one ton per minute and operated in a seam 4½ feet thick. It was used for experimental purposes and the analysis of its operation furnished the necessary data for the designment and development of subsequent machines.

In 1911, tunnel contractors became interested in the possibilities of the shoveling machine for this class of work and a machine was used at Tallulah Falls, Georgia, in a water power tunnel. This machine was later shipped to Flat River, Missouri, and on a contract basis over a period of two years loaded over 100,000 tons of lead ore. In 1912, this same machine was used in the construction of the New York aqueduct tunnel under New York City.

The success of these original installations led to a further development of the machines principally in connection with rock and ore mining. In 1913, a machine was installed in a rock salt mine at Retsof, New York. This machine, with seven others, is still in operation. In 1917, the Alpha Portland Cement Company installed a shoveling machine at its plant in Ironton, Ohio. The average daily loading of these machines is 300 tons per nine-hour shift, at a labor cost of less than 4½ cents per ton and with a maximum day's run of 413 tons for a single machine.

In tunnel mucking, the use of shoveling machines has done much to increase the speed of driving the tunnel and to reduce the cost of mucking. Four machines such as the one indicated in the accompanying photograph were used in the Shandaken Tunnel for the New York Water Supply and thirteen machines of the same size and type were used in the famous Hetch Hetchy Tunnel for the San Francisco Water Supply.

Some of the results obtained in the Hetch Hetchy Tunnel are an indication of the effective operation of these shoveling machines. On June 30, 1920, the engineer in reporting on tunnel construction stated: "A progress of 2,915 feet was made in this heading, in a formation of slate, quartzite and mica shist that at times required timbering. A Myers-Whaley shoveling machine was in continuous service and unquestionably accounts for the maximum progress with the minimum cost for the work."

With the introduction of additional shoveling

machines, the cost of driving the tunnel was reduced from $28 per foot when hand mucking was employed to $22.18 per foot through the use of the shoveling machine, and the round was drilled, blasted and loaded in a shift and a half instead of two shifts. The size of the tunnels was approximately 11 feet by 11 feet 3 inches and 13 feet by 13 feet, and there was a pull of about 13 feet at a shot. A single shot is loaded out ordinarily in 5½ hours.

The engineer in charge of this tunnel construction states: "The No. 4 Myers-Whaley machine is a standard with us on all of our tunnel work where the tunnel driving is conducted from portals or adits. Machines have proved equally satisfactory in 11 foot to 13 foot tunnel sections. The character of the material being handled ranges from slate to coarse blocky granite." Although this shoveling machine has had its prineipal development in tunnel construction work and rock mining, there has been a noticeable increase in the number of intallations of such machines in coal mine operations and the results obtained are indicative of the possibilities which are presented through the further development, refinement and perfection of shoveling machines for underground loading.

A coal company in West Virginia using two of these machines writes under date of November 8, 1921, as follows: "We have been able to drive our headings much more rapidly and with fewer men than with hand loading. We find that with the use of these machines the investment in houses on account of the smaller number of men necessary to produce a fixed tonnage is less than it would be were hand loaders used; and also that we can depend upon a certain daily tonnage which could not be depended upon with hand loaders."

Another company using a machine in Colorado writes on January 5, 1922, as follows: "The shoveling machine installed in August, 1921, has been in continuous operation since the day it was assembled at the Columbine Mine, Weld County, Colorado.

"During this period the machine has not been out of commission nor lost any operating time The machine has operated continuously, has loaded an average of 100 tons of coal per day of eight hours and could have been used for a larger volume of tonnage if it had not been for the fact that its operation had been curtailed to three entries, and the maximum width of the entries where the machine has been working and is now working is 10 feet and from 7 to 8 feet high."

An Indiana operator utilizing one of these shoveling machines writes as follows: "We can procure approximately four times the yardage by using machine instead of hand labor in a shift of eight hours. This gives us a tonnage at a considerable saving and at the same time advances our development work more rapidly."

In order to secure satisfactory results from the operation of these machines, the following essential conditions are required:

The machines must have good solid tracks upon which to work, as no jacks or fastenings of any kind are employed. The machine relies upon its weight and friction on the track to maintain its stability and give the necessary force to shovel.

The material to be loaded should be shot down in such a way as to enable the shoveling machine to clean up the room without undue delay. This is important, as the machine will load and clean up a 40-ton room in about 1½ hours if there is no delay due to waiting for material to be broken down.

It is essential to arrange the side tracks and trips with an ample supply of cars, so that a minimum of time will be consumed in moving out the loads and placing the empty cars back of the machine. Under ordinarily good conditions this can easily be done in less than one minute per car. Time spent in shifting cars about is wasted and will naturally reduce the output of the machine.

These machines are equipped with a 20-h. p. motor and the power lines and supply should be amply large enough to furnish power to the motor.

These machines are relatively easily operated. Intelligent men can learn to operate them without undue loss of time. Competent mechanics, however, should have charge of the machines in order to secure the best results. This is true of every type of mine equipment machinery.

The Myers-Whaley Company is now manufacturing two standard types of machines. The No 3 machine, which weighs approximately 13,000 pounds, has a minimum height from rail to top of conveyor belt of 3 feet 8 inches and is about 22 feet long. It cleans up a space 16 feet wide and can be used satisfactorily in seams of coal at least 5 feet thick. The average capacity is from 50 to 60 tons per hour of actual shoveling time.

The No. 4 size machine weighs 18,500 pounds, has a minimum height from rail to the top of the conveyor belt of 4 feet 7 inches and is about 26 feet long. It cleans up and loads in an area 20 feet wide and can be used satisfactorily in seams of coal at least 6 feet 4 inches thick. The average capacity of this machine is from 60 to 70 tons per hour of actual shoveling time.

It is obvious that where automatic shoveling machines can be effectively operated there is a distinct saving in the cost of development, in the reduction of the number of cars needed for a given tonnage, in the reduction of labor force required to load and in the more effective organization of the mine into districts with unit bodies.

PRODUCTION OF BAUXITE IN 1921

THE PRODUCTION of bauxite in the United States in 1921 was 139,550 long tons, valued at $889,800, according to figures collected by J. M. Hill, of the Geological Survey. This is not much more than one-fourth of the production in 1920. This great decrease was due to lack of demand from all consuming industries, as shown in the second table below. The production from the Arkansas field was only 124,850 tons in 1921, and this field has produced as much as 570,000 tons in a year. The Eastern States produced only 14,700 tons as compared with a maximum production of 62,100 tons Georgia produced 10,174 tons, and Alabama and Tennessee each contributed a small tonnage to the Eastern States total.

Bauxite produced and consumed in the United States, 1920-1921—

	Domestic production	Imports	Exports*	Apparent consumption
1920.....	521,308	42,895	22,257	541,946
1921.....	139,550	27,587	5,942	161,195

*Bauxite concentrates.

Mining products are creating considerable discussion during the Senate debate on the revised tariff bill, which is making slow progress in that body due to the exhaustive debate being indulged in. Practically every one of the 3,000 items embraced in the bill is being subjected to debate by various senators. The opposition is contending that in many cases the duties proposed are not justified and in other cases that the duties are too high. The mine tariff debate has revolved around schedules covering manganese, cyanide, arsenic, barytes and lead. Western senators, led by Senators Pittman and Oddie, of Nevada, are opposing the proposed duty on cyanide on the ground that it will add further costs in mining operations, particularly in gold and silver mining, which they contend is already in a depressed condition. The barytes duties were attacked by numerous Senators to such an extent that Chairman McCumber, of the Senate Finance Committee, said the committee would further consider the proposed duty of $5 per ton on crude barytes ore. The lead duties were also subjected to criticism and while the manganese item has not yet been reached by the Senate, there has been considerable preliminary discussion thereon. Western Senators are seeking a duty on manganese. Senator Walsh, Montana, said if high duties are given barytes, manganese should also have a duty. Senator Johnson, California, said he would vote for a manganese duty in order to protect American producers. Senators Underwood, Alabama, and Gooding, Idaho, engaged in extensive debate on raw materials. The Alabama Senator favored free raw materials while the Idaho Senator advocated protective duties in behalf of American producers.

The Senate is manifesting considerable interest in the oil question adopting resolutions by Senator LaFollette, of Wisconsin, for investigation by the Senate Public Lands Committee of leases on naval oil reserves by the Interior Department and a resolution by Senator McKellar, Tennessee, for an investigation by the Senate Manufactures Committee of the reason for the increased price of gasoline in view of the reduced price of crude oil.

Congress has enacted and the President approved a law extending until June 30, 1924, a law restricting immigration to 3 percent of those from foreign countries residing in the United States in 1910.

Senator Pittman, Nevada, introduced a bill repealing a former law authorizing citizens of Modoc County, Calif., to cut timber in Nevada for mining or other domestic purposes.

Senator Edge, New Jersey, was unable to secure the passage of his resolution authorizing the appointment of a Congressional Commission to investigate the status of trade associations. Hearings thereon will be given by the Senate Committee on Interstate Commerce, which has before it the bill of Senator Edge, defining the status of these associations.

The Senate Committee on Commerce and the House Committee on Merchant Marine have held joint hearings on the proposed ship subsidy bill in which there has been considerable discussion as to the relative merits of oil and coal as fuel for vessels. The subsidy bill proposes aid to private steamship lines, including oil tankers and ore vessels.

The Senate passed a bill permitting the states to obtain patent from the Interior Department for school lands about which uncertainty exists due to mineral content discovered after the grant of land.

The Senate has also passed a bill extending for 12 months after its enactment, provisions of Section 18-a of the Leasing Law to lands in Utah embraced in executive withdrawal of October 4, 1909.

The House passed a bill of Representative Denison, of Illinois, regulating the sale of securities otherwise known as the Blue Sky Bill, which is now before the Senate Committee on Interstate Commerce and on which hearings will be held. The bill was subjected to considerable opposition by eastern and western members on the ground that it would interfere with mining development. The House, however, passed the bill on the ground that the public should be protected from unscrupulous transactions. The administration of the bill is under the Department of Justice. Those objecting to the bill pointed out that it would be expensive for mining properties in their initial stage to undergo the expense of securing the approval of stock sales in the various states.

Hearings were held by the House Committee on Mines and Mining on the proposed revision of the mining law. The necessity of bringing the laws up to date to meet existing mining conditions was explained by Director Bain of the Bureau of Mines, and W. R. Ingalls, of New York, chairman of the committee of engineers which proposed the bill. Chairman Rhodes, of the Mines and Mining Committee, indicated that unless the bill was modified to meet objections advanced in numerous communications received by the committee it would not be favorably acted on.

Senator Moses, of New Hampshire, introduced a bill providing for an 8-hour day in mines and other establishments beginning next year.

The House Committee on Ways and Means reported a resolution proposing an amendment to the Constitution giving the U. S. power to tax income derived from Federal and state securities.

Representative Williamson, South Dakota, introduced a bill creating a national park in South Dakota, but stipulating that valid claims under mineral laws are not to be affected thereby.

Congress appropriated $500,000 to enable the Department of Justice to investigate and prosecute alleged frauds growing out of war contracts.

Under a bill introduced by Representative Kahn, of California, the Interior Department would be placed in charge of the production and conservation of helium for the Army and Navy, export of the product to be prohibited except on approval of the President and the sur-

IMPORTANT BILLS REVIEWED IN THIS ISSUE

MINING—
- H. R. 11549: By Mr. Kahn. (Helium production)
- H. R. 11659: By Mr. Oldfield. (Placer location)
- S. 3519: By Mr. Bursum. (Indian lands)

TAXATION—
- H. J. Res. 314: By Mr. Green. (Taxing Federal and state securities)

OIL—
- S. 2460: Passed by the Senate. (Utah Oil Lands)
- H. R. 11363: By Mr. Mondell. (Naval oil royalties)
- H. J. Res. 297: By Mr. Appleby. (Oil pollution conference)
- H. R. 11580: By Mr. Snyder. (Indian leases)

POWER—
- H. R. 11449: By Mr. Swing
- S. 3511: By Mr. Johnson. (Colorado River development)
- H. R. 10428: By Mr. Hayden. (Arizona development)

LABOR—
- S. 3509: By Mr. Moses. (8-hour day)
- H. R. 11155: (2nd Asst. Secy. of Labor)

COAL—
- H. R. 11022: By Mr. Bland. (Coal investigation agency)
- H. R. 11607: By Mr. Petersen. (Cost investigation)

PATENTS—
- S. 3410: By Mr. Stanley. (Operation required)

plus of helium over the military needs to be sold to individuals, corporations and institutes of learning or research under American control.

Proposed coal legislation advanced another step when the House Committee on Labor reported the Bland bill creating a coal investigation agency of 10 members to investigate and report within the next two years on conditions and phases of the coal situation. It is proposed in this bill that if any company refuses to furnish information requested by the agency, it shall be denied the right to ship coal in interstate commerce. The agency would be made up of the Directors of the Geological Survey, Bureaus of Mines and Census and Commissioner of Labor Statistics with two members each, representing the public, miners and operators. The agency would obtain information as to supply, production, distribution, storage and consumption of coal and its grading and economic utilization; wages and working conditions; and ownership and value of coal lands. The bill is on the House calendar subject to consideration at any time.

In reporting the bill Mr. Bland denied that it regulates, controls or interferes with the coal industry in any way but seeks to obtain facts concerning disputed questions in the coal industry.

The Senate adopted a resolution by Senator LaFollette, of Wisconsin, calling on the Attorney General and Federal Trade Commission for information as to whether the proposed merger of steel companies can be prevented under the anti-trust laws.

Senator Norris, chairman of the Agricultural Committee, considering the Muscle Shoals, Ala., nitrate plant lease offers, introduced a bill prepared by former Representative Lloyd, of Missouri, for incorporation of a federal chemical corporation for operation of the plant.

The House Committee on Foreign Affairs has reported the Appleby resolution requesting the President to call a conference of maritime nations to check oil pollution.

Representative Oldfield, Arkansas, introduced a bill to validate placer mining patents located prior to October 1, 1919, in Tillman County, Okla., which were recently invalidated by a Supreme Court decision to the effect that the lands were not subject to placer mining locations.

Following the action of the Senate in ratification of the armament conference treaties, the House passed a bill authorizing the scrapping of vessels under the naval limitation treaty.

MINING

(*Placer Locations*)

H. R. 11659. Introduced by Mr. Oldfield; referred to the Committee on Public Lands. This bill is designed to validate placer mining patents in the south half of Red River, in Oklahoma, recently invalidated by the Supreme Court decision to the effect that the land in question was not subject to the U. S. mining laws. The bill directs the Secretary of Interior to issue to the Melish Consolidated Placer Oil Mining Association, oil and gas placer-mining patents for the Border Line, Tiger, Lucky Spot, and the Black Jack, located prior to October 1, 1919, on land owned by the U. S. in Tillman County, Okla., between the middle of the main channel and the south bank of Red River, where such bank constitutes the boundary line between Oklahoma and Texas. Such patents would give the same rights, title, interest and obligations as if the lands had been subject to entry under the placer-mining laws of the United States at the time such entries were made or attempted. It is provided that the exception in section 37 of the leasing act shall be applicable to these lands. The bill further directs the Interior Department to investigate other placer mining entries and claims made or attempted in good faith in the locality described prior to Oct. 1, 1919, together with applications for leases on such entries on behalf of the entrymen submitted within six months after approval of the leasing act and report to Congress such relief legislation as may be found necessary.

(*Helium*)

H. R. 11549. Introduced by Mr. Kahn; referred to the Committee on Public Lands. This bill places the Interior Department in charge of the production and conservation of helium and transfers to that department all existing government plants. The bill authorizes the department to carry on experiments relative to the production of helium and to acquire and operate plants and rights necessary for production and storage. The bill forbids exportation of helium except on approval of the President. The helium supplies shall be first placed at the disposition of the War and Navy Departments, any surplus to be leased or sold to citizens, corporations and institutions of learning and research, provided they are controlled by American citizens. The bill appropriates $5,000,000 to carry out its purposes. The War and Navy Departments shall annually, before September 1, submit to the Interior Department their estimated requirements for helium for the next year.

(*Indian Lands*)

S. 3519. Introduced by Mr. Bursum; referred to the Committee on Indian Affairs. This bill creates the All Year National Park, embracing the Mescalero Apache Indian Reservation, the Elephant Butte Reservoir, the White Sands and the Mal Pais lava beds in New Mexico. The act does not abrogate the provisions of mining laws in the territory reserved for park purposes. Any coal deposits which may be found on the present Mescalero Indian Reservation may be leased or worked for the benefit of the Indians.

(*Mineral Lands*)

S. 889. Passed by the Senate. Now

before the House Committee on Public Lands. This bill is designed to assure title to lands granted states in aid of public schools caused by uncertainty which has arisen as to their mineral content. The bill proposes that in any case "wherein lands so granted have been purchased in good faith from any state and hereafter are found by final decree of a Federal court of final judgment of the Secretary of the Interior or Commissioner of the General Land Office in proceedings initiated under the provisions of this act to have been of known mineral character at the time the grant to the state would have otherwise attached, the transferees of the state, mediate or immediate, shall have a right to a confirmatory patent from the United States with reservation of the mineral deposits in the land to the United States, and of rights to prospect for, mine and remove the same in accordance with the provisions of existing laws, upon payment of $1.25 per acre, or to a patent without such reservation, except as to metalliferous minerals, upon payment of the appraised price of the land as such purchaser may elect."

TAXATION

(Federal and State Securities)

H. J. Res. 314. Introduced by Mr. Green (Iowa) and reported to the House by the Committee on Ways and Means. It proposes an amendment to the Constitution which, if ratified by three-fourths of the states would give the United States power "to lay and collect taxes on income derived from securities issued, after the ratification of this article, by or under the authority of any state, but without discrimination against income derived from such securities and in favor of income derived from securities issued, after the ratification of this article, by or under the authority of the United States or any other state."

Sec. 2 of the proposed amendment stipulates that each state shall have power to lay and collect taxes on income derived by its residents from securities issued, after the ratification of this article, by or under the authority of the United States; but without discrimination against income derived from such securities and in favor of income derived from securities issued, after the ratification of this article, by or under the authority of such state.

The committee reports that at present there are tax exempt securities outstanding valued at from ten to eighteen billion dollars. The committee condemns the present system of exempting securities on the following grounds:

A large portion of property escapes taxation, thereby causing great loss of revenue.

It violates the ability principle of taxation and unfairly discriminates between taxpayers.

It impedes private financing.

It discourages investment in new enterprises.

It encourages extravagances of governmental agencies.

It grants a private subsidy to certain interests.

By withdrawing money from private enterprises it increases the rate of interest required for all enterprises not carried on by the government and thereby adds to the cost of living.

It creates social unrest.

OIL

(Utah Lands)

S. 2460. Passed by the Senate; pending in House Committee on Public Lands. This bill provides that for twelve months after its enactment the provisions of section 18-a of the leasing law shall cover land in Utah embraced in Executive order of withdrawal issued October 4, 1909.

(Royalty Payments)

H. R. 11363. Introduced by Mr. Mondell; referred to the Committee on Public Lands. This bill proposes that 37½ percent of the royalties from lands in naval petroleum reserves shall be paid to the states within which the reserves are located.

(Pollution Conference)

H. J. Res. 297. Introduced by Mr. Appleby. Reported to the House by the Committee on Foreign Affairs. It would request the President to call a conference of maritime nations with a view to the adoption of effective means for the prevention of pollution of navigable waters by oil-burning and oil-carrying steamers by the dumping into such waters of oil waste, fuel oil, oil sludge, oil slop, tar residue, and water ballast. The resolution is based on the fact that careless casting of oil refuse into the sea from oil-burning and oil-carrying steamers menaces fishing, creates fire hazard, and injures seashore property.

(Indian Leases)

H. R. 11580. Introduced by Mr. Snyder; referred to the Committee on Indian Affairs. This bill would authorize the Secretary of the Interior to lease for prospecting and development of oil and gas, unallotted Indian lands in the Navajo Indian reservations in Arizona, New Mexico and Utah. Royalties derived therefrom would be divided equally among the Indians, the state in which produced and the government reclamation fund.

POWER

(Colorado River)

H. R. 11449. Introduced by Mr. Swing; referred to the Committee on Irrigation. This bill proposes the regulation, control and development of the Colorado River in a comprehensive and unified plan, conserving natural resources, aiding flood control, water supply, and power development. The bill reserves to the United States the exclusive right to construct, provide, and control dams, reservoirs, or diversion works upon the main trunk of the river below the mouth of the Green River. The bill proposes construction by the Interior Department of a dam and incidental works to provide a reservoir at or near Boulder Canyon and a main canal and structures in the United States connecting the Laguna Dam with the Imperial and Coachella Valleys in California. The bill would authorize 50 year leases of power, lease preferences to be given to political subdivisions. The bill appropriates $70,000,000 to carry out the project.

S. 3511. Introduced by Mr. Johnson; referred to the Committee on Public Lands. This bill is similar to the foregoing.

(Arizona Development)

H. R. 10248. Introduced by Mr. Hayden; reported to the House from the Committee on Irrigation. This bill would authorize 50-year contracts under the Interior Department for the development of surplus power under the Salt River reclamation project in Arizona. The Supt. of the Salt River Valley Water Users Association reports that the Inspiration Copper Co. and the Miami Copper Co. have decided to finance this development if the legislation is enacted.

LABOR

(Eight Hour Day)

S. 3509. Introduced by Mr. Moses; referred to the Committee on Labor. This bill proposes that beginning January 1, 1923, eight hours shall, in contracts for labor and service, be deemed a day's work in any mine, quarry, mill, cannery, workshop, factory, or manufacturing establishment, situated in the United States and engaged in the production of wares which enter into interstate commerce.

(Asst. Secretary)

H. R. 11155. Reported to the House from the Committee on Labor by Mr. Zihlman. This bill creates a second Assistant Secretary of Labor.

COAL

(Investigation Commission)

H. R. 11022. Introduced by Mr. Bland and reported to the House by the Committee on Labor. This bill proposes the establishment of a commission to inquire

into labor and other conditions in the coal industry. It would be composed of: The Director of the Geological Survey, the Director of the Bureau of Mines, the Director of the Bureau of the Census, and the Commisisoner of Labor Statistics, two members representing the public, two the miners and two the operators. The miners representatives would be selected by the President from four nominees suggested by the United Mine Workers of America. The operators representatives would be selected as follows: one from two nominees suggested by the National Coal Association and one from two nominees suggested by the Anthracite Bureau of Information and Anthracite Coal Operators Association.

Members other than the government officials named would be paid a salary of $6,000 a year. Their confirmation would be required by the Senate. The agency would continue for two years. The bill provides that the agency shall secure information as a basis for legislation by Congress "(a) to settle industrial disputes in and prevent the overdevelopment of the coal industry, (b) to stabilize such industry and levy taxes in respect thereto, (c) to regulate commerce in coal among the several states and with foreign nations, (d) to provide a coal supply for the maintenance of the Navy and the District of Columbia, and forts, magazines, arsenals, dockyards, and other public buildings of the United States outside the District of Columbia." To this end, the agency is authorized to require and obtain from any person, such data, information and reports as it deems desirable on the following points: "(1) as to the supply, production, distribution, storage and consumption of coal and its grading and economic utilization, (2) as to the relations between operators of coal mines and washeries and their employes with particular reference to wages, hours of labor, and working conditions, and (3) as to the ownership and value of coal lands, and of property of operators or owners which is of use in the operation of coal mines or washeries." The agency shall report to Congress and the President from time to time and also submit a final report. Such reports shall not contain information which would disclose trade secrets of any person.

Authority is given the Commission to summon the attendance of witnesses and the production of books, papers, documents, or other evidence from any place in the United States. In the following paragraph, it is proposed to forbid the shipment of coal in commerce for disobedience of orders of the agency:

"In case of failure to comply with any subpoena or in case of the contumacy of any witness before the Coal Investigation Agency, the agency may invoke the aid of any United States district court. Such court may thereupon order the witness to comply with the requirements of such subpoena, and to give evidence touching the matter in question. If the court makes such order it may also fix in the order the time for compliance therewith, and enjoin the witness from shipping or receiving from shipment in commerce among the several states or with foreign nations any coal after the time so fixed and before his obedience to the order. Any failure to obey such order or injunction may be punished by the court as contempt thereof."

Severe penalties are proposed for violation of the law which appropriates $50,000 for its execution for the period ending June 30, 1923. It is also proposed that "If any provision of this act or the application thereof to any person or circumstance is held invalid, the validity of the remainder of the act and of the application of such provision to other persons and circumstances shall not be affected thereby."

(*Cost Inquiry*)

H. R. 11607. Introduced by Mr. Petersen; referred to the Committee on Mines and Mining. This bill proposes the establishment of a coal investigation agency of three members appointed by the President to continue for one year. It proposes that "for the purpose of providing information for the Congress as a basis for legislation the Coal Investigation Agency is authorized and directed to require and obtain from any person such data, information, and reports as it deems desirable for its purpose; to inquire into and determine what items make up the difference between the cost of coal at the mines and the cost of coal to the consumer." The usual powers to require attendance of witnesses and production of papers are contemplated for this agency.

PATENTS

(*Operation Required*)

S. 3410. Introduced by Mr. Stanley; referred to the Committee on Patents. This is intended as a substitute for previous bills on this subject introduced by the Senator and provides for the operation of patents as follows: "That two years after the issuance of any United States patent, or at any time after the expiration of that period, if it is shown that the invention covered by such patent is being worked in a substantial manner in a foreign country, and that the owner thereof has failed to work it in the United States, and has refused or refuses to grant licenses thereunder upon such reasonable terms as would make it practicable to practice the patent in the United States, then on the petition of any reputable American citizen, corporation, or partnership, exclusive jurisdiction is hereby granted to any United States circuit court of appeals in whose district or circuit the last known residence of the owner of the patent is located, and in the case of an alien, the Court of Appeeals of the District of Columbia, to investigate upon a proper hearing, all the pertinent facts and the burden of proof shall be upon the owner of the patent to show that he has been and is using reasonable diligence in bringing about the bona fide working of said patent either himself or through the aid of licensees in the United States on a scale sufficient to show a bona fide establishment of the industry therein, and upon failure to make such showing, the court shall order a nonexclusive license granted to the petitioner upon such terms as it shall determine to be equitable. The costs therein to be adjudged to be paid by the party against whom the decree is entered.

"After the expiration of three years of the granting of a license as herein provided, and upon the petition of either party in interest, the court which granted the license shall hear the parties with a view to investigating existing conditions and making such changes in the rate of royalty as in its judgment conditions warrant; the expenses of such proceedings to be charged to the party against whom the decision is made: *Provided, however,* That nothing in this act shall be construed to prevent the parties to such a license to agreeing among themselves as to the royalties to be paid."

COPYRIGHTS

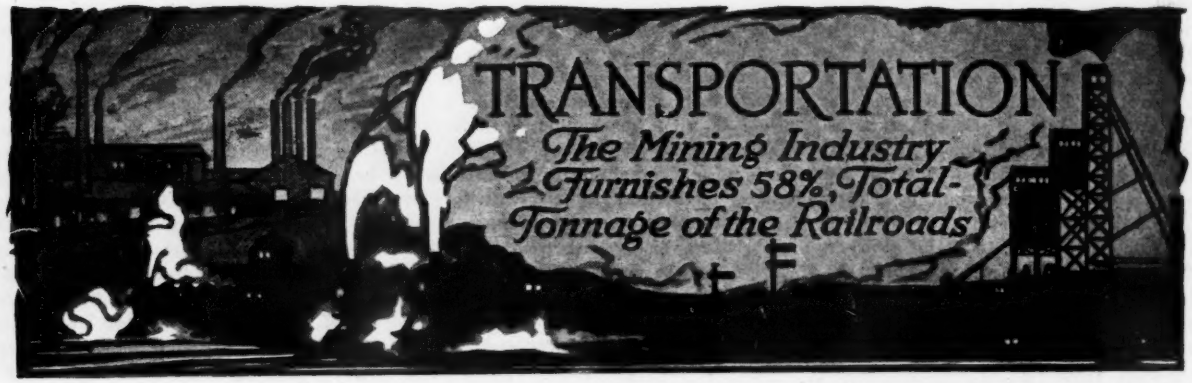
(*International Union*)

H. R. 11456. Introduced by Mr. Tincher; referred to the Committee on Patents. This bill would amend the copyright law so as to permit the United States to enter the International Copyright Union for the protection of literary and artistic works.

PERSONAL

The Philadelphia and Reading Coal and Iron Company has announced the following changes in the personnel of its sales organization:

J. H. Sessions, northwestern sales agent, Minneapolis, Minn., for many years the company's representative in the Northwest, retires from active duties at his own request and is hereby appointed manager of retail sales. E. T. McDonald, formerly sales agent at Milwaukee, Wis., is appointed northwestern sales agent with offices in the Lumber Exchange Building, Minneapolis, Minn. D. H. Kirkpatrick is appointed sales agent at Milwaukee, Wis., with offices in the Majestic Building.



INTERSTATE COMMERCE COMMISSION REQUIRES REDUCTION IN FREIGHT RATES ON ALL COMMODITIES

THE DECISION of the Interstate Commerce Commission, which has been expected for a long time, requires the railroads throughout the country to make general reductions in all freight rates, and finds that beginning with March 1, and for the future, 5¾ percent on the tentative valuation for rate-making purposes will constitute a fair return upon the property. When the carriers were returned to their owners the law provided that rates allowing a return of 6 percent should be fixed until March 1 of this year, after which the Commission was allowed to name what percent would be considered a fair return.

The general reductions required, effective July 1, are on all commodities and differ in the different territories. In the late summer of 1920, following an award of wages by the United States Labor Board, the Interstate Commerce Commission allowed the carriers to make large increases in all rates, and the present decision requires them to go back to the rates in effect at that time plus specific increases as follows: In the eastern group and also in Illinois territory and between points in these two territories the carriers are allowed now to increase the rates in effect August 25, 1920, by 26 percent instead of 40 percent authorized at that time and now in effect. In the western group and between the western group and Illinois territory the 35 percent increase then authorized and now in effect is changed to 21.5 percent. In the southern and mountain Pacific groups the increase of 25 percent allowed at that time has now been changed to 12.5 percent, and on traffic between the territories the 33 1-3 percent authorized in 1920 and now in effect is changed to 20 percent. It is the finding of the Commission that the carriers in these groups, under honest, efficient and economical management, and reasonable expenditures for maintenance of way, structures and equipment, will be able to earn an aggregate annual net railway operating income equal as nearly as may be to a return of 5.75 percent upon the aggregate value of the railway property of such carriers taken for rate-making purposes. Numerous other findings also are made, allowing the carriers to establish these rates on short notice, making provision for orders in specific cases outstanding and for violations of the fourth section of the act, the disposition of fractions, and such other matters of detail as arise in these cases. No orders are issued at the present time, but the respondents are expected to advise the Commission not later than May 31 whether these findings will be carried into effect without formal orders.

In dealing with this matter the Commission has made some comment as to specific commodities:

Coal and Coke

In reviewing these commodities the Commission found that during the five-year period ended with 1920 the annual production of bituminous coal averaged approximately 530 million tons, 40 percent of which is consumed by industries, 28 percent by railroads, and the remainder for domestic and miscellaneous purposes. The hearing developed the fact that a large majority of witnesses favored reductions in coal rates. Much evidence was given as to the large part the freight charges on coal have in determining production costs of numerous commodities, as well as the part they play in the expenses of the railroads. The Commission also goes into the question of how reductions would affect different roads because of the fact that some are entirely dependent upon their coal traffic while others find coal to be a small percentage of their total tonnage.

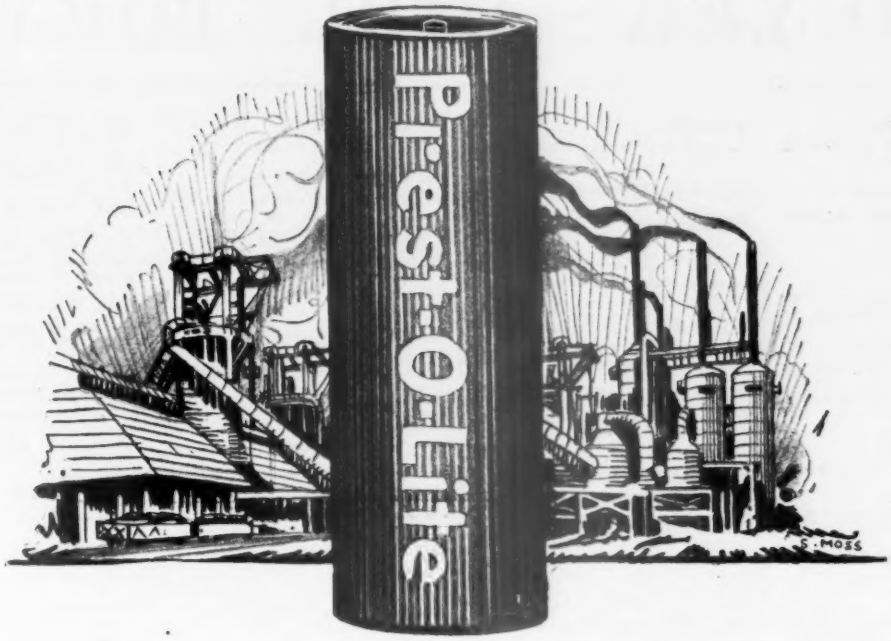
The conferences which President Harding has been having with railway executives, as well as those which the executives have had with the Interstate Commerce Commission, now indicate that the President does not believe the relief which the Commission affords to the shippers in this opinion will be sufficient, so far as basic commodities are concerned, to properly start the wheels of commerce turning. Consequently, it is understood that these conferences will continue, with a view of getting the carriers voluntarily to make further reductions in the rates on basic commodities to the extent that they are able to do so. It is the general belief, however, that the President is not overoptimistic that his efforts in this direction will be rewarded by further substantial reductions, because he undoubtedly realizes the difficulties which the carriers are confronted by and he, of course, is advised of the legal limitations placed upon the Interstate Commerce Commission by the Transportation Act. It is quite probable, however, that at the coming session of Congress in December he will make some recommendations as to how the Interstate Commerce Act can be amended, and it is likely that he also will indicate some method of bringing the United States Railroad Labor Board closer to the Commission so that their efforts may be coordinated.

INDUSTRIAL NOTES

The Bucyrus Company, South Milwaukee, Wis., have under way at the present time extensive enlargements to both its plants at South Milwaukee, Wis., and Evansville, Ind.

These changes and rearrangements are planned to take care of their increasing volume of business and to enable them to manufacture more economically. In the South Milwaukee plant, where all the larger machinery is built, a new gray iron foundry is now under construction, 276 feet in length.

Read on this page, from issue to issue, a description of the features which have made Prest-O-Lite a national institution



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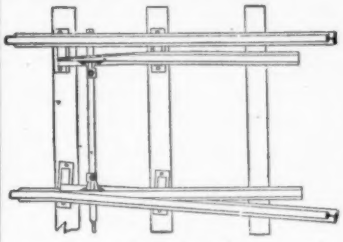

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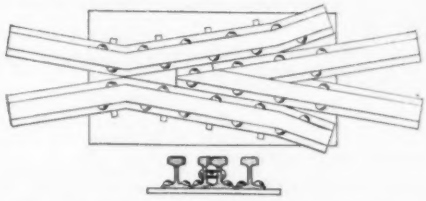

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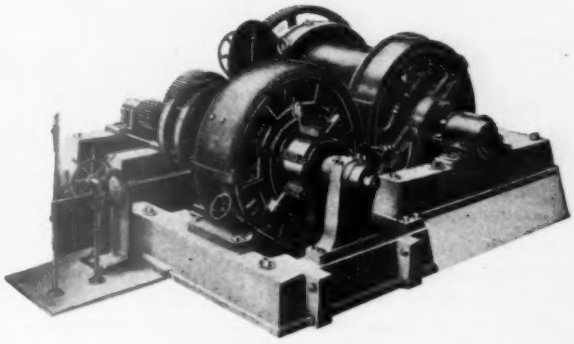

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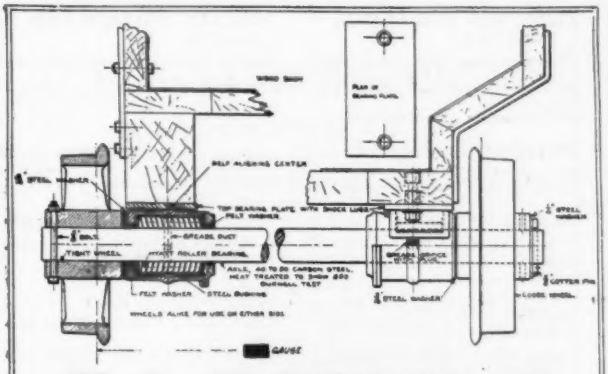

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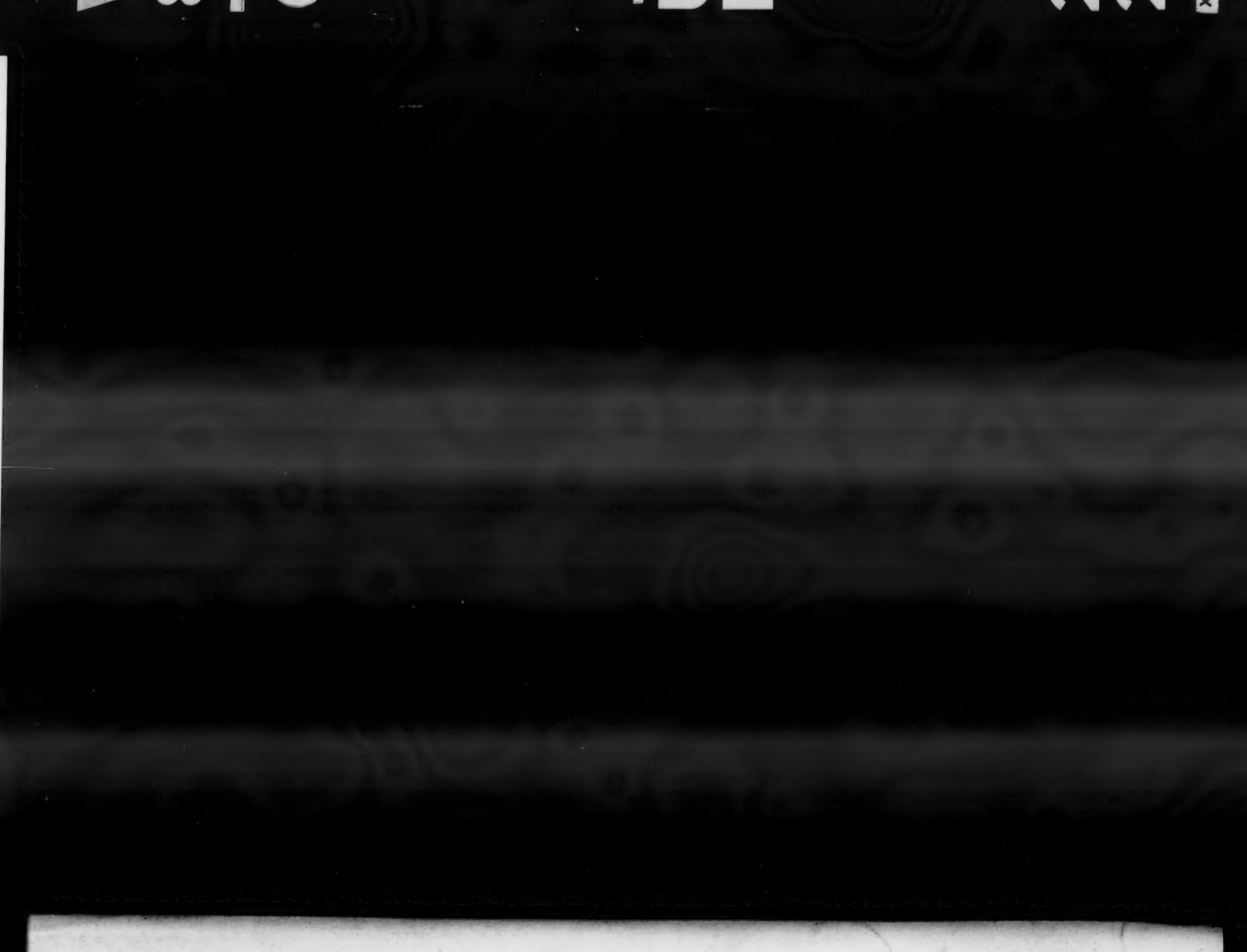
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